849

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CGATCCTGGT AGTCATTGGG AAGCCATTCG TCAGACAATC GAGAAGATCA ACAAACCGAT      4620

CTGTGCTATT CTCTTGACCC ACGCCCATTA TGACCATATC ATGAGTCTGG ACTTGGTTCG      4680

CGAGACGTTT GGCAATCCTC CTGTCTATAT CGCAGAGAGC GAAGCCAGCT GGCTCTACAC      4740

TCCTGTCGAT AATCTCTCCG GTCTCCCTCG CCACGATGAT ATGGCAGATG TGGTCACAAA      4800

ACCTGCAGAA CACACCTTTG TCTTTCACGA AGAATACCAA CTAGAGGAAT TTCGTTTTAA      4860

GGTTCTACCG ACCCCAGGGC ACTCTATCGG TGGTGTTTCC CTAGTCTTTC CTGATGCTCA      4920

TCTAGTCTTG ACGGGAGATG CTCTATTCCG CGAAACTATC GGACGGACCG ACCTTCCGAC      4980

TGGTAGCATG GAGCAACTCC TTCATAGTAT CCAGACCCAA CTCTTCACCC TACCAAACTA      5040

CGATGTCTAT CCAGGACATG GTCCAGCTAC TACTATCGCT CACGAAAAGG CCTTCAATCC      5100

CTTTTTCTAG CAAGATGATG ACAATCGAAA TTTAAGTAAA CTATCCAGCA AATCTTTCTA      5160

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AGATTTTTTG CATTACCAAA TAATCACGCG CTCCTCTGGT GAACGCCACA TTCCGTCTCC      5280

TTCTTTGACA TCATAGGTTG TAAAGAAATC GTCGAAGTTT GGTACTTGCA CATTGACACG      5340

GAGTTTGGCT GGTGCGTGCA CATCGACGCT AGCCAAAAGT TTCATAAATT CTGGTCGACC      5400

TTTCATGCGC CAGATGCGAC CGAAGTTGTA GAAGAACTCT TCTGCTGAGA AGTCTGCTTC      5460

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CACTGCCCCA ATACCACCGT AGTTAGCAGA AGATGACTGA TGCAAGTCAT AGAAAGGCGC      5760

CTGTAAAATG GCCGCTGGAA AGACAATCAG GTTCTTCTGA GGATTGTAGT AGGCATTGAC      5820

CATATGAGCA GGCATGCCCC ATTCCTTATA ATCTACAGGC TGGTTCCACT TACTCCAACT      5880

GTGCTTGATT TCCACACGCG CAAAGGCTAG AGCATTCTCA AAAAGACTGG CAGTTTCATT      5940

CACTACCTTA TCCTTGTAAC GTGCAGGCAA TTCTTCTGGA TAGCCAATAT AAGGTTTGAT      6000

CACATTGAGC TTCACGATAG CCTGTTTACA GGTTTCTGGA GTGAGCCAGT CATTCTTAAG      6060

CAGACGCTCC TTATAAACAT CAATCATGGT TGCCACTTTT TTCTCCACAT CCGCCTTGGC      6120

TTCTGGAGAG AACTTCTCAC GGGCGTACCA AAGACCCAGG GCTTGCTTGA AAGGTTCTTG      6180
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850

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TGCTAGATGA TAAGCTGCTT TGACCTTATC TTTTGCCTCT GGAACTCCAG AAAGGGCACG      6240

GCTGTAGGCA CCAGACAAAA CACGGATATC CTCTGTTAAA TAGCTGGTTG AAAGATTGAC      6300

AACACTCAAA ATCAAGGTTG CTTTAAGGAG AGACCAGGCT TCCTCACTGT AGAATTGCTC      6360

TGCTGCTTGC CAGAAACGTT CCTCGTCTAC AATAACCTTG TCTGGTAATT GCCCAATAAC      6420

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TAAATCAACA AAACCTCCTG TTTGAGACTT ATCTGCTGGG ATTTCAGCTG TCTGTTGCCA      7080

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ATTTGTATTT GCATTTATCT TAACAAAAAT CG                                    7172
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(2) INFORMATION FOR SEQ ID NO: 121:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 4518 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 121:

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CGGGAAGTTA TGCGATCTAG ACTTCGTTCC TGTACAGCTA CTTTCTCAGG TGGTCTTGTT        60

GTTTGTATGA GTTTGTTTAG AGAGGATCTT TCTATGTCTT TCTTTCTTAT TTTTGTTTTA       120

TATGCTTTTC TGATTTCTTA TCTAATTTAT GGTTATTTCA GACTAAAAAG GAAATACCGA       180

GTAGATGAAT AGCAAGGTTC TAGGTCTTCA GATTGATTTT TAGCACTCTT GATAAAAGAG       240

TGCTAATTTT TTGAGTTTTT GTCTTGACAT TCTCTTCTAA GGGTGTATAA TAGAATCATG       300

AGTTAGCACT TGGATGCATT GAGTGCTAAT TGATCAGACA GAGAGGAGTG ATGAGATGGT       360

TACAGAGCGT CAGCAGGATA TTTTAAATCT GATTATTGAC ATCTTTACCA AAACGCACGA       420
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851

ACCTGTCGGA TCAAAAGCCT TGCAAGAGTC TATTAACTCT AGCAGTGCAA CCATTCGTAA   480

TGACATGGCG GAACTAGAAA AACAAGGGTT GCTTGAGAAG GCTCATACTT CAAGTGGTCG   540

GATGCCAAGT GTTGCTGGTT TTCAGTACTA TGTGAAACAC TCACTGGATT TTGACCGGCT   600

GGCTGAAAAT GAGGTATATG AGATTGTCAA AGCCTTTGAT CAGGAATTCT TCAAATTGGA   660

GGATATTCTG CAAGAGGCTG CTAACTTACT AACAGACCTG AGTGGCTGTA CGGTAGTGGC   720

ACTGGATGTT GAGCCGAGCA GGCAACGTTT GACAGCCTTT GATATCGTTG TTTTGGGGCA   780

ACATACAGCC TTGGCGGTAT TTACCCTAGA CGAGTCGCGA ACGGTTACTA GTCAGTTTCT   840

GATTCCAAGG AACTTCTTGC AGGAGGATTT GCTGAAACTG AAGAGCATCA TTCAGGAACG   900

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TATCCAGCGT TACTTTACAA CAACGGATAA TGTCATCGAT CTCTTTGAAC ACATCTTTAA   1020

GGAAATGTTC AACGAAAACA TTGTGATGGC GGGCAAGGTC CATCTCTTGA ATTTTGCCAA   1080

TCTAGCAGCC TATCAGTTCT TTGACCAACC GCAAAAGGTG GCCTTGGAGA TTCGTGAGGG   1140

GTTGCGTGAG GATCAGATGC AAAATGTTCG TGTTGCAGAC GGTCAAGAGT CCTGTTTAGC   1200

TGACCTAGCG GTAATCAGTA GTAAGTTCCT CATTCCTTAT CGGGGAGTTG GAATTCTAGC   1260

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CCGTGTTTTG ACCATGAAGT TGACAGATTT TTACCGCTAC CTCAGCAGTA ATCATTACGA   1380

AGTACATTAA GATTGAAATC ATTAAAGGAG GCGAACATGG CCCAAGATAT AAAAAATGAA   1440

GAAGTAGAAG AAGTTCAAGA AGAGGAAGTT GTGAAAACAG CTGAAGAAAC AACTCCTGAA   1500

AAGTCTGAGT TGGACTTGGC AAATGAACGT GCAGATGAGT TCGAAAACAA ATATCTTCGC   1560

GCTCATGCAG AAATGCAAAA TATCCAACGC CGTGCCAATG AAGAACGTCA AAACTTGCAA   1620

CGTTATCGTA GCCAGGACTT GGCAAAAGCA ATCTTACCAT CTCTTGACAA CCTTGAGCGT   1680

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AGCTTGATTC ACGCTTTGAA AGAAGAAGGA ATTGAAGAAA TCGCAGCAGA TGGCGAATTT   1800

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ACCATCGCTC AAGTCTTTCA AAAAGGCTAC AAACTCCATG ACCGCATCCT ACGCCCAGCA   · 1920

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TGTTCGATTC GGCAATTCTG ACGGTAGCTA AAGCAACTCG TCAGAAAACG GCAATCGCTA   2100

TGGCGTTTGC CTAGCTTCCT TACTAACTCG TCGTCGAAAT AAAATCGATT TCGACTCCTC   2160

852

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GTGTCGCAAT TTACATAATA GAAAACTTGT CCGAAACGAC AATAAACTAT GAAGAAAGAT      2220

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AGAAAATTAA CTAACAAGGA GAAAAACACA TGTCTAAAAT TATCGGTATT GACTTAGGTA      2460

CAACAAACTC AGCAGTTGCA GTTCTTGAAG GAACTGAAAG CAAAATCATC GCAAACCCAG      2520

AAGGAAACCG CACAACTCCA TCTGTAGTCT CATTCAAAAA CGGAGAAATC ATCGTTGGTG      2580

ATGCTGCAAA ACGTCAAGCA GTTACAAACC CAGATACAGT TATCTCTATC AAATCTAAGA      2640

TGGGAACTTC TGAAAAAGTT TCTGCAAATG GAAAAGAATA CACTCCACAA GAAATCTCAG      2700

CTATGATCCT TCAATACTTG AAAGGCTACG CTGAAGACTA CCTTGGTGAG AAAGTAACCA      2760

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TTGCTTATGG TTTGGACAAG ACTGACAAAG AAGAAAAAAT CTTGGTATTT GACCTTGGTG      2940

GTGGTACATT CGACGTCTCT ATCCTTGAAT TGGGTGACGG TGTCTTCGAC GTATTGTCAA      3000

CTGCAGGGGA CAACAAACTT GGTGGTGACG ACTTTGACCA AAAAATCATT GACCACTTGG      3060

TAGCAGAATT CAAGAAAGAA AACGGTATCG ACTTGTCTAC TGACAAGATG GCAATGCAAC      3120

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TCAGCTTGCC ATTTATCACT GCAGGTGAGG CTGGACCTCT TCACTTGGAA ATGACTTTGA      3240

CTCGTGCGAA ATTTGACGAT TTGACTCGTG ACCTTGTTGA ACGTACAAAA GTTCCAGTTC      3300

GTCAAGCCCT TTCAGATGCA GGTTTGAGCT TGTCAGAAAT CGACGAAGTT ATCCTTGTTG      3360

GTGGTTCAAC TCGTATCCCT GCCGTTGTTG AAGCTGTTAA AGCTGAAACT GGTAAAGAAC      3420

CAAACAAATC AGTAAACCCT GATGAAGTAG TTGCTATGGG TGCGGCTATC CAAGGTGGTG      3480

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TCGAAACAAT GGGTGGAGTA TTTACAAAAC TTATCGATCG CAACACTACA ATCCCAACAT      3600

CTAAATCACA AGTCTTCTCA ACAGCAGCAG ACAACCAACC AGCCGTTGAT ATCCACGTTC      3660

TTCAAGGTGA ACGCCCAATG GCAGCAGATA ACAAGACTCT GGACGCTTC CAATTGACTG      3720

ATATCCCAGC TGCACCTCGT GGAATTCCTC AAATCGAAGT AACATTTGAC ATCGACAAGA      3780

ACGGTATCGT GTCTGTTAAG GCCAAAGACC TTGGAACTCA AAAAGAACAA ACTATTGTCA      3840

TCCAATCGAA CTCAGGTTTG ACTGACGAAG AAATCGACCG CATGATGAAA GATGCAGAAG      3900

CAAACGCTGA AGCCGATAAG AAACGTAAAG AAGAAGTAGA CCTTCGTAAT GAAGTAGACC      3960
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853

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AAGCAATCTT TGCGACTGAA AAGACAATCA AGGAAACTGA AGGTAAAGGC TTCGACGCAG       4020

AACGTGACGC TGCCCAAGCT GCCCTTGATG ACCTTAAGAA AGCTCAAGAA GACAACAACT       4080

TGGACGACAT GAAAACAAAA CTTGAAGCAT TGAACGAAAA AGCTCAAGGA CTTGCTGTTA       4140

AACTCTACGA ACAAGCCGCA GCAGCGCAAC AAGCTCAAGA AGGAGCAGAA GGCGCACAAG       4200

CAACAGGGAA CGCAGGCGAT GACGTCGTAG ACGGAGAGTT TACGGAAAAG TAAGATGAGT       4260

GTATTGGATG AAGAGTATCT AAAAAATACA CGAAAAGTTT ATAATGATTT TTGTAATCAA       4320

GCTGATAACT ATAGAACATC AAAAGATTTT ATTGATAATA TTCCAATAGA ATATTTAGCT       4380

AGATATAGAG AATTATATTA GCTGAACATG ATAGTTGTAT CAAAAATGAT GAAGCGGTAA       4440

GGAATTTTGT TACCTCAGTA TTGTTGTCTG CATTTGTATC GGCGATGGTA CCGTATCTGA       4500

CGAACGTTCA GCTTATAT                                                     4518
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(2) INFORMATION FOR SEQ ID NO: 122:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 8145 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 122:

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TGCTATTTTC GATTCCCTTG GGCGTTTTGA TTGCCTTTGC CTTGCAAGTC CATTGGAAGC        60

CCCTCCATTA TCTGATTAAC ATTTACATCT GGGTTATGCG AGGAACCCCC TTACTCTTGC       120

AACTGATTTT TATCTATTAT GTGCTCCCAA GTATTGGGAT TCGTTTAGAC CGCCTTCCTG       180

CAGCTATTAT TGCCTTTGTT CTCAACTATG CAGCTTACTT TGCAGAAATT TTCCGTGGGG       240

GAATTGACAC TATTCCAAGA GGACAGTATG AGGCCGCCAA GGTCTTGAAG TTTAGCCCTT       300

TTGACAGAGT GCGCTATATT ATCTTGCCCC AAGTGACCAA GATCGTTCTT CCTAGTGTCT       360

TTAATGAAGT TATGAGTTTG GTCAAGGATA CTTCTTTGGT CTATGCTCTC GGAATTTCAG       420

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TGGCAGGAGC CATTTATTTG ATTTTGATTG GGATTGTGAC AATTATTTCC AAAAAAGTTG       540

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TCCTGGCTAT CGTTGGACCT TCTGGTGGAG GTAAGACAAC TCTTTTACGT ATGCTTGCAG       720

GTCTTGAAAC CATTGATTCA GGGCAAATCT TTTATAATGG ACAACCTTTA GAGCTGGATG       780
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854

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AGGCTGAGAA GAAGGCGAGT GGACTCTTGG AACAGTTAGG ACTAGGAGGA CACGCAGAGG          960

CCTATCCTTT CTCACTATCT GGTGGGCAAA AGCAGCGGGT GGCTTTGGCG CGTGCTATGA         1020

TGATTGACCC AGAAATCATT GGCTACGATG AACCAACTTC TGCCCTGGAT CCAGAATTAC         1080

GTTTGGAAGT GGAGAAGCTA ATCTTGCAAA ATAGGGAACT TGGGATGACC CAGATTGTGG         1140

TTACCCATGA TTTGCAGTTT GCTGAAAATA TCGCAGATGT ATTATTGAAA GTAGAACCTA         1200

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TGTTCTTAGT AGCTTGTGGG AAAAATTCTA GCGAAACTAG TGGAGATAAT TGGTCAAAGT         1320

ACCAGTCTAA CAAGTCTATT ACTATTGGAT TTGATAGTAC TTTTGTTCCA ATGGGATTTG         1380

CTCAGAAAGA TGGTTCTTAT GCAGGATTTG ATATTGATTT AGCTACAGCT GTTTTTGAAA         1440

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855

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GATAAGTCTA GTATGCCATA AAGTTTCTAA AATTGCTTAG ATTTGATACG AAAAAAGATG      2760

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AGTCGGACGA AGGCTTTCAA ATACGTAAGA TTTGATGCCG TGTTTAGCAA GAACTGCCGC      4200

AGATTCAAAG GCAAACTCAG GTGAGAAGTG ACGGCTATCG TAGGCAATTG CTACACCGCG      4260

TTCTTTCTCG TTTCCACCTT TTGACTCAAT CAAACGAGCC AATCCTTCAG TAGCTTGGCG      4320
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856

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AACAACGTAG ATGTTGATAC GGTTTGTACC AGCACCAACC AAGCCACGCA TACCTGCAGT    4380

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TGTCTTGAAA CAGGTTGATA AAGATACTCC TAATACCCCA ACTTGGCTAA ACTCAGCTGC    6120
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857

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TTCTAAAGCT AAAGATGATG ACAGAGTATA TAAACTACTG AAGACTCTTA TACCAGGAGA       6180

AAATTACCTA TCATGTTAAG GATAATCAGC TAGAAGTAGA AACAGATAAA TACACATATA       6240

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CACTTTGTAG GGGTAGACAA AGGGATTGTG CGAACGAATG TACTGACTGG TAAAAAACTA       6480

TCTGATAAGA TTAGGAAAGA AGTGGGCTCT GGAGATAGCA AACTAGGAAA AGGCGGCTAT       6540

TTCTCTACTG GGGATGTTCT ATTAGGAAAA GATGTTGTTT CTTATACCGT ACAAGTATTT       6600

TCAGAGAATA ATGAAAGAGT AGGAGTAAAC ACTCAAAGTC ACCGTGTTCA GTATAATCTC       6660

CCAATTCTAG CTGACTTTTC AGTCATCCAA GATACTGTGG AACCATCACG AACCGTTGTT       6720

GAAAAAATCA TTCCAAAACT AAATATTCCC GAAGAAGAGA AAGGGAAAAT AACCGAAGAA       6780

ATCAAGAAAA AGAAAAAAAC CTCAGAATTG GCAGAACTAA TCTCAGAAAA TGTGAAAGTT       6840

CGCTATGTTG ATGAACAAGG GCGTTTGCTA TCATTGAAAA ATGATACTGG AATTGGAGAA       6900

AAAGAAAGTG ACGGAACCTA CATTACCAAT AAAAAACAAC TGATTGGTAC CAGCTATAAT       6960

GTCACAGATA AAAAACTCAG TAGCATGACT ACTACTGACG GAAAATATTA TACTTTTAAA       7020

GAAGCAGATA CAAATTCTGC AAGTTTAACT GGGAATATTG TAAGCGAAGG TAGAACAGTG       7080

ACCTTAGTTT ATAGAGAAAG CGAAGCGCCA ACCACTGCTA CAGTAACAGC CAATTACTAT       7140

AAAGAAGGTA GGCAAGAGAA GTTGGTAGAG TCTGTTATAA AAGCTGATTT AGCGATAGGT       7200

TCTGAGTATA CCACAGAATC AAAAACTATT GAAGGGAAAA CAACAACTGA GGACAAAGAA       7260

GACCGAGTTA TCACAAGGAA AACAACATAC ACCTTGGTAG CAACTCCTGA AAATGCGTAC       7320

CAGAAGACGG TGCAACAGTT GACTATTACT ACCGTGAGAA TGTTGAGGAA ACAGTGGTTC       7380

CCAAAACAGC AACCTCTACT GAGACGAAGA CTATAACGCG TATCATTCAT TACGTTGATA       7440

AAGTTACGAA CCAAAATGTA AAAGAAGATG TTGTTCAACC TGTAACCTTA AGCCGTACAA       7500

AAACTGAGAA CAAGGTCACG GGAGTTGTAA CCTACGGTGA ATGGACAACA GGAAACTGGG       7560

ACGAGGTTAT ATCTGGTAAG ATTGACAAGT ACAAAGATCC AGATATTCCA ACAGTTGAAT       7620

CACAAGAAGT TACGTCAGAC TCTAGTGATA AAGAAATAAC GGTAAGGTAT GACCGTTTAT       7680

CAACACCAGA AAAACCAATC CCACAACCAA ATCCAGAGCA TCCAAGTGTT CCGACACCAA       7740

ACCCAGAACT ACCAAATCAA GAGACTCCAA CACCAGATAA ACCAACTCCA GAACCAGGTA       7800

CTCCAAAAAC TGAAACTCCA GTGAATCCAG ACCCAGAAGT TCCGACTTAT GAGACAGGTA       7860
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858

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AGAGAGAGGA ATTGCCAAAC ACAGGTACAG AAGCTAATGC TACCTTGGCT AGTGCTGGTA          7920

TCATGACCTT GTTAGCTGGT CTAGGATTAG GATTTTTCAA GAAAAAAGAA GATGAAAAAT          7980

AATAGATTTT AGAATCTAGG AACCAGGAAA AGCTCACAGA TGTGGGCTTT TTTCCTGGTT          8040

TTGAGAACGA GGTCTTTCGT AAAGAATAAA AACGCTTACA AGTCTGTTGA ACTGGGAAAC          8100

TATGAATCCT ATTTTTTTAA AAATATTTCC AGAAATCAGT TGCGG                          8145
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(2) INFORMATION FOR SEQ ID NO: 123:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 8697 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 123:

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CGGTACCGGG AACGATACTT AGTCTAATTT TGCACCTTTT CCATGTATGG TAAAGGTTTT           60

TCTTTTTTTA AAAAGGAAAA CGAGAAGAGG AGGTTCTTAT GAAAGCAAGC ATTGCCTTGC          120

AAGTTTTACC CCTAGTACAG GGGATTGATC GGATAGCTGT TATTGATCAG GTCATTGCTT          180

ATCTGCAwAC TCAAGAAGTG ACGATGGTAG TGACACCATT TGAAACGGTC TTGGAAGGGG          240

AGTTTGATGA GCTTATGCGC ATTCTAAAAG AAGCGCTGGA AGTGGCAGGG CAGGAGGCAG          300

ACAATGTCTT TGCCAATGTC AAAATAAATG TAGGAGAGAT TTTAACTATT GATGAGAAAC          360

TTGAGAAGTA TACTGAGACG ACACATTAGT CTATTGGGCT TTCTCGGAGT ATTGTCAATC          420

TGGCAGTTAG CAGGTTTTCT TAAACTTCTC CCCAAGTTTA TCCTGCCGAC ACCTCTTGAA          480

ATTCTCCAGC CCTTTGTTCG TGACAGAGAA TTTCTCTGGC ACCATAGCTG GGCGACCTTG          540

AGAGTGGCTT TACTGGGGCT GATTTTGGGA GTTTTGATTG CCTGTCTTAT GGCTGTGCTC          600

ATGGATAGTT TGACTTGGCT CAATGACCTG ATTTACCCTA TGATGGTGGT CATTCAGACC          660

ATTCCGACCA TTGCCATAGC TCCTATCCTG GTCTTGTGGC TAGGTTATGG GATTTTGCCC          720

AAGATTGTCT TGATTATCTT AACGACAACC TTTCCCATCA TCGTTAGTAT TTTGGACGGT          780

TTTAGGCATT GCGACAAGGA TATGCTGACC TTGTTTAGTC TGATGCGGGC CAAGCCTTGG          840

CAAATCCTGT GGCATTTTAA AATCCCAGTT AGCCTGCCTT ACTTTTATGC AGGTCTGAGG          900

GTCAGTGTCT CCTACGCCTT TATCACAACT GTGGTATCTG AGTGGTTGGG AGGTTTTGAA          960

GGTCTTGGTG TTTATATGAT TCAGTCTAAA AAACTGTTTC AGTATGATAC CATGTTTGCC         1020

ATTATTATTC TGGTGTCGAT TATCAGTCTT TTGGGTATGA AGCTGGTCGA TATCAGTGAA         1080

AAATATGTGA TTAAATGGAA ACGTTCGTAG AATTAGAATG TTTCTGAAAA AGAAAAGAGG         1140
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859

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AAATCAAAAT GAAGAAAACA TGGAAAGTGT TTTTAACGCT TGTAACAGCT CTTGTAGCTG     1200

TTGTGCTTGT GGCCTGTGGT CAAGGAACTG CTTCTAAAGA CAACAAAGAG GCAGAACTTA     1260

AGAAGGTTGA CTTTATCCTA GACTGGACAC CAAATACCAA CCACACAGGG CTTTATGTTG     1320

CCAAGGAAAA AGGTTATTTC AAAGAAGCTG GAGTGGATGT TGATTTGAAA TTGCCACCAG     1380

AAGAAAGTTC TTCTGACTTG GTTATCAACG GAAAGGCACC ATTTGCAGTG TATTTCCAAG     1440

ACTACATGGC TAAGAAATTG GAAAAAGGAG CAGGAATCAC TGCCGTTGCA GCTATTGTTG     1500

AACACAATAC ATCAGGAATC ATCTCTCGTA AATCTGATAA TGTAAGCAGT CCAAAAGACT     1560

TGGTTGGTAA GAAATATGGG ACATGGAATG ACCCAACTGA ACTTGCTATG TTGAAAACCT     1620

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ACAAAGAAGA AGCTCGCAAA GTCATCCAAG CCATCAAAAA AGGCTACCAA TATGCCATGG     1920

AACATCCAGA AGAAGCTGCA GATATTCTCA TCAAGAATGC ACCTGAACTC AAGGAAAAAC     1980

GTGACTTTGT CATCGAATCT CAAAAATACT TGTCAAAAGA ATACGCAAGC GACAAGGAAA     2040

AATGGGGTCA ATTTGACGCA GCTCGCTGGA ATGCTTTCTA CAAATGGGAT AAAGAAAATG     2100

GTATCCTTAA AGAAGACTTG ACAGACAAAG GCTTCACCAA CGAATTTGTG AAATAATGAC     2160

AGAAATTAGA CTAGAGCACG TCAGTTATGC CTATGGTCAG GAGAGGATTT TAGAGGATAT     2220

CAACCTACAG GTGACTTCAG GCGAAGTGGT TTCCATCCTA GGCCCAAGTG GTGTTGGAAA     2280

GACCACCCTC TTTAATCTAA TCGCTGGGAT TTTAGAAGTT CAGTCAGGGA GAATTGTCCT     2340

TGATGGTGAA GAAAATCCCA AGGGGCGCGT GAGTTATATG TTGCAAAAGG ATCTGCTCTT     2400

GGAGCACAAG ACGGTGCTTG GAAATATCAT TCTGCCCCTC TTGATTCAAA AGGTGGATAA     2460

GGCAGAAGCT ATTTCCCGAG CGGATAAAAT TCTTGCGACC TTCCAGCTGA CAGCTGTAAG     2520

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CTACCTTTTT GGGCACAAGC TCTTTCTCTT AGATGAGGCC TTTAGCGCCT TGGATGAGAT     2640

GACAAAGATG GAACTCCACG CTTGGTATCT TGAGATTCAC AAGCAGTTGC AGCTAACAAC     2700

CCTGATCATC ACGCATAGTA TTGAGGAGGC CCTCAATCTC AGCGACCGTA TCTATATCTT     2760

GAAAAATCGC CCTGGGCAGA TTGTTTCAGA AATTAAACTA GATTGGTCTG AAGATGAGGA     2820

CAAGGAAGTC CAAAAGATTG CCTACAAACG TCAAATTTTG GCGGAATTAG GCTTAGATAA     2880
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860

GTAGAAAAAT AGGGAGTTGG TGAAGATTAT CCTTTACCAG CGCCCTTTTT CTTTTAAAAA   2940

TGAGAAAATT TCGGTATAAT AGTCAAACAA GGTCAAGGTT TAAAGAGAGA GGTGGGTTTG   3000

TTATGAGATT TAAAAATACA TCGGATCATA TTGAGGCCTA CATCAAGGCG ATTTTAGATC   3060

AATCTGGTAT CGTGGAGTTG CAACGGAGTC AGTTGGCAGA TACCTTTCAG GTTGTTCCTA   3120

GTCAGATTAA CTACGTGATC AAGACACGCT TTACGGAAAG TAGAGGCTAC TTGGTTGAAA   3180

GTAAGCGTGG TGGCGGAGGC TACATTCGTA TAGGACGGAT TGAGTTTTCT AGTCATCATG   3240

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AATCAGTAGC TTTGGATCGC GTTTTAGGAG AAGAAGCTCC AGTTGTTCGA GCAAACATGC   3420

TACGTCAGAT CATACAAGAG GTAGATAGAA AAGGGAAGTA AGATGAACTA TTCAAAAGCA   3480

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GAGTCGTGGC ACTTGTTGAT TGCCATGTCT AATCACAGTT ATAGTGTAGC AGGGGCAACT   3600

TTAAATGATT ATCCGTATGA GATGGACCGT TTAGAAGAGG TGGCTTTGGA ACTGACTGAA   3660

ACGGACTATA GCCAGGATGA AACCTTTACG GAATTGCCGT TCTCCCGTCG TTTGCAGGTT   3720

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ACAGTAGCTG ACAAGCAAAA TTCTATGGCC AATATGATGG GCATGCCGCA GACTCCTAGT   4020

GGTGGTCTCG AGGATTATAC GCATGATTTG ACAGAGCAAG CGCGTTCTGG CAAGTTAGAA   4080

CCAGTCATCG GTCGGGACAA GGAAATCTCA CGTATGATTC AAATCTTGAG CCGGAAGACT   4140

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GAACTTGATT TGATGAATGT CGTTGCAGGG ACACGCTTCC GTGGTGACTT TGAAGAACGC   4320

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CTCCACACCA TCATGGGTTC TGGTAGCGGG ATTGATTCGA CTCTGGATGC GGCCAATATC   4440

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GAAGAACCAA GTGTGGCAGA TAGTATGACT ATTTTACAAG GTTTGAAGGC GACTTATGAG   4620

AAACATCACC GTGTACAAAT CACAGATGAA GCGGTTGAAA CAGCGGTTAA GATGGCTCAT   4680

861

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CGTTATTTAA CCAGTCGTCA CTTGCCAGAC TCTGCTATCG ATCTCTTGGA TGAGGCGGCA      4740

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GACAAGGCCC TGATGGATGG CAAGTGGAAA CAGGCAGCCC AGCTAATCGC AAAAGAAGAG      4860

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AACCGTATTG ATGAGAAGGT GGTCTTCCAT AGCCTATCTA GTGATCATAT GCAGGAAGTG      5640

GTGAAGATTA TGGTCAAGCC TTTAGTGGCA AGTTTGACTG AAAAAGGCAT TGACTTGAAA      5700

TTACAAGCTT CAGCTCTGAA ATTGTTAGCA AATCAAGGAT ATGACCCAGA GATGGGAGCT      5760

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GCAGGTTGCT CAAAACACTG TTTTGAGGTT GTAGATAGAG CTGACGTGGT TTGAAGAGAT      6360

TTTCGAAGAG TATAAGCTGC AAGATGAATG ATTTTCTTGT ATTGACGTTG TTGTTGACAA      6420
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862

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AAAGTAGCGG ATAAATGAAA TCCATTCCAT TATCATAGAT GATAGGCTGG TAGGAAATTT      6480

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AAGAGGGTTA TCATGTCATT ATGGCTAAGG ATGGACAAGA GGTCTTGGAA AAATTTCAAG      6660

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GCAATTTGTT CACGGGGTGG ATGTCTACAA AGAAGCAAAG AATATTTTGC TTTTGTATCT      7620

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GACTGTTAAG CCAGTTTTAG TAGATATTTT ATCACGTTAT CAAGAATTAG CTCATTCAAT      8160

AGGTGTTACA ATTGAAAATC AATTGACAGA TGCTACCAGG GTCGTCATGA GTCTTAGGGC      8220
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863

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ATTGGATAAG GTTTTGACAA ACCTGATTAG TAATGCAATT AAATATTCAG ATAAAAATGG        8280

GCGTGTAATC ATATCCGAGC AAGATGGCTA TCTCTCTATC AAAAATACAT GTGCGCCTCT        8340

AAGTGACCAA GAACTAGAAC ATTTATTTGA TATATTCTAT CATTCTCAAA TCGTGACAGA        8400

TAAGGATGAA AGTTCCGGTT TGGGTCTTTA CATTGTGAAT AATATTTTAG AAAGCTATCA        8460

AATGGATTAT AGTTTTCTCC CTTATGAACA CGGTATGGAA TTTAAGATTA GCTTGTAGAC        8520

AGATTAGTTT TTTATTAAAG TTCATATAGG GTTAACATAA GTGTGTTATT CTTTGTGTAG        8580

ATAAAAGAAA GGATACTAAT ATGGTATTAG CGATTATTTT AGTAACATTC TTTATTCGAT        8640

TGATTTTTTT AAAGCGTTCG ATAGAGAATG AGAAACGAAT CCTTAGCAAT GGCGGGG          8697
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(2) INFORMATION FOR SEQ ID NO: 124:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 4317 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 124:

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AACCATACAT ACGGCAAGGC AAAGCTGACG CGGTTTGAAG AGATTTTCGA AGAGTATTAG         60

TTGCCTTTAA AGGCATCCAC CATCGTTTGA AATTCTTCAT TTGAGAGAGT AATCCCTTTG        120

CCCATTTTAG TATGGTCTGG ACTCCAAGCA CGAATATCAA ACTTTGCAGG GGCACCATTA        180

AAGCTCACAC GGTTAATTTC CTTGGTCCAA CCTTTTTCGT TTTCAGAAAG AGTCAACAAG        240

TGCTCTTCGA TTTCAAATGT AAATTCTGCC ATTTTCTTCT CCTTTTTTAG TTTCATTAGT        300

TTATTCGTAA AATCTTGTAG ATTTTAGGAA AATTTTATAT AATATTGATA TAAAAGAAGG        360

GAGGCCAATA TGAGACATAA ATTCCAGCAA GTTCTAAATA AAATACATGA TTTTTTAAAT        420

GGATATGACC AACCTGACCA GACTGAAACC AACTCCCTTA CAGCCACTAT TGAAGAGGCT        480

ATCCAGAAAC AAACCGCTGT TCACCTTATC TTGTCTGAGA CAAGCTTTAC AGGTGACATC        540

ATCAAATATG ATCAGCAAGG CCAGCAAATT ATCGTGAAAA ATTTTTCCAA AAATGTGAGC        600

CGGATTATCC GTATAAGCGA TATTCAACGC CTGCGATTTG TCCCCTCAAC TGTCCAAACA        660

GCCCAAAAAA ATAGATTTAA GAAAGAGTGA GATGTAGTTG CTTCATCCCA CTCTTTTTTC        720

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CAAGTCACGT TGTAAACGAT AGGAAATGTA GTGTTCTGCA ATGGTAATGT AACCTGCGCC        840

CAATAAACGA TGTTCAACCA TAGATTGAAT CATACTGATA GTCGCACGTT CCACCTTGGC        900
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864

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TTCTTGTAAA TCCAAAACTA CCTTCTTAGT GACTTGAGCA AGATTTTGAC GCAAATCATC          960

TGTCAAAACA TAAACAGTTT GGGCTGCCTT CAAGATGGCT TGGTAAATCT TATCTGGATT         1020

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TTTTCTTTGA TTTCTGCCAG CATTTTTTCT TCTTCTACTG TCAGTTGATA ATGTTCAAGT         1140

AAATCCGGTC TGCGCTCGTA GGTTTTCTTT AAACTCTCGT ACAATCGCCA CTGACGAATC         1200

TTTTCATGGT GGCCACTCAT CAATACATCT GGCACGACCA TGCCTCGATA ATCATAGGGA         1260

CGTGTGTACT GAGGATATTC TAAAAGACCT GAAGAAAAAC TATCATCTTG GTGGCTAGAC         1320

TCCTTGCCAA TCACTTCTGG AATCAGGCGA ACTGTAGCAT CAATCATGGT CATAGCTGCC         1380

AATTCTCCAC CAGTGAGGAC ATAGTCACCT AGGGAAATCT CATCTGTTAC CAAGGTCTTA         1440

ATGCGCTCAT CATAACCCTC ATAGTGCCCA CAGATAAAGA TTAGCTCTTC CTCTTGAGCC         1500

AAATCTTCAG CATAAGCCTG ATCAAACTGC TTTCCAGCAG GATCAAGGAG AATAACGCGC         1560

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ACCGATAATC TCGTGATAGT AAAATTCACC ATCGTCTAGG TCATTCAAAT CTTCCTCAGC         2040

GACCTTGAGA CTGTATCCCT TGTACTTTTC GATAGTATTG ATATGGTACA TATCTTTGAA         2100

TTTAATAATG TCAAAGTTCT TCTGTTTACG GTGGCTAGCG ATGGTCACTG TTTGGACAAA         2160

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TTCCTCAGTA ATCTCTCCAG ATATCTGAAA TTCTGGATCT TGATTTTCCA ACTCTAAGCC         2580

TTTTTCTTGC ATTAATTCCC AGATTTTTTT ATTCGTTTCA GGACTAAATG TTGCTTGAGT         2640

TAAGTTCTTA AAATAAAGTT CAGGACCACA CTCGTCAATC AGCCTCATCT GCTCTTCCAT         2700
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865

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TTCTGGATAA GGATTTTCTG AAAAATCAGC AAACATGACT TTTTTAGTTG TCGGTTCAAT    2760

TGCTACTAAA GTCTGACGCT TAATTGGTTT CTCGAGTAAT TTGCAAGCTA AAATTCCACT    2820

CCAACTATGT GCACAAAGTA TATATTCAGA AATTCCTAAT TCTTCAAGTA CTTCATAAAC    2880

CGCATCTGCA AGATTATCTA GATTTTTTCC AGCTTGGTCA TGAATCGGAC TCCTACCTGT    2940

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GAAATCCACT GATTCTATAT AATGAATTAT TAAAAATCCT TATCCTTTAT TTTATCACGT    3180

TCCAAGGATT TTCTCAAGTT GGAGGAAGGG GACAATATCT CTACTTTCCC TTCAATAATC    3240

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TCTTGGTAAG GTCAATATGA TTAATAGCTA CGATTGCGAC GGTGTAGTAA ATGATATCAG    3360

CCAGTTCTCT GGCAAGTTCC TCGTTCGAAT CCTATCCCTT CTTTTCGACC AGAGCGCCTA    3420

TTCAAAACCT CGACTACTTC TCCGACTTCC TCCACTAACT TCATAAAGAG ACCTTCATCA    3480

GTCCGAGACT GCTGTTAATG TTCGATTAAG TAGTCTTGGA ATTGCCTAAA CGTTCAATCT    3540

TTTATAGTAT ATTGAAACTA GAATAGTACA CCTTTACTTC TAAAACATTG TTAGAAATCG    3600

ATTTGACTGT CCTGATCGAT TTGTCCTGTT CTTGTTTCAT TTTACTATAT CTTCTATTCC    3660

ACACAAAAAA GCGAGACATC CGTCCCGCCC TTCTTATTTT TCGTCAATAA CGATTCTTAC    3720

TTTTTTGTAT TCAGTTGGGA CAGAGTAGAC AATCGTTCTT ATCGCAGAAA TAGTGCGACC    3780

CTTACGACCG ATTACACGAC CCACATCGCT TTGATCAAGA TTCAAATGAT ATTCCAAAAA    3840

TTCTGGTGTA TCCTCAATCT TGATAGTTAA GGCATCTGGT TGTGAAATTA AGGGTTTCAC    3900

AATCGCAATA ATGAGATTTT CAATCGTATC CATCTGTCAA CCTACTTTAA ACTTATTTTG    3960

AAAATTTAGA ATCGTGGAAT TTTTTCAATA CGCCTTCTTT TGAAAGGATG TTACGTACTG    4020

TGTCTGAAGG TTGAGCTCCA TTAGCCAACC ATGCAAGAAC GCGGTCTTCT TTCAAAGTTA    4080

CTTGGTTTTC AGCAACAAGT GGGTTGTAAG TTCCAACTGT TTCGATGAAA CGTCCGTCAC    4140

GTGGTGAACG TGAATCTGCT ACGTTGATAC GGTAGAAAGG TTTTTTCTTA GAACCCATAC    4200

GAGTCAAACG GATTTTAACT GCCATTTTTA AAGTCTCATT TCTTTAATTT TTTATTTCGG    4260

TGAAATAGCT GAGCTATTTA GCACATGTTC TATTATAGCA GATTTCTGGC ATGTGTC      4317
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(2) INFORMATION FOR SEQ ID NO: 125:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 4881 base pairs

866
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 125:

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AATTTATTTG ACTGGAAATT GTAGAGGGTT CTCGAAATTT CTTGAATGGT TAAAATAAGG          60

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CAACCTGAGG AAAGCAGTGA TTCTTATTTT AGGAGTTAGG AATGAATACA CGAAATCAAT         180

TTAGCTGATT ATTTTTTGTT TTTCAAGAAT TCATCGTATT GTTTTTGCAT TTCGTTCAAT         240

ACTTTTTCGT AGGCACCTTC AGATTTCAAT TTTTCCATCA ATTCTGGAAT CGCTTTATCT         300

GGGTCTACAG TACCAGTGTT GATAGCTGTA TCAAATTGTT GCATTGTGTT AGCAATAGCT         360

GAGATTTCAG ATTTCACATT GTCAGTATTG AAGATAAATC CAAGCGCTGG AGATTCTTTA         420

GCTTCTGCCA ATTCTTTCTT AGAATTTTCG ATTTGTTGGT CTGTAACGTT TTCGTTGATG         480

TAAAGGATCC AGTTGTTACC AGTGTTCCAT CCACCCATGT GAGTGTTTCC TTTGTAGCCA         540

TCAAGAACGC GAACACGGTT TTCTTTACCT TCAATTTTTT CCCAGTTCTT GCCTTCTGGA         600

CCGTAAACAA GACCGTTCAA GAGTTCTGGG TTCGTATTCA AGAGGTTCAA GATTTCCATT         660

GATTTTTCTT TGTTCTTAGA GTTGTTTGAG ATGACAAAGT TAGCAACTTG TGTTGTTTGG         720

TTTTTCTTGA TGAAGTTAGT AATTGGTTTG ATTTCGATAT CTTTGTTGGC AACACGTGAA         780

AGCAAGCTGT TACCGTAGTC AGCTGGTCCT ACTGTTTCTT CACGAACGAA CCAAGTATCT         840

TGTTGAAGGT CAAAGGAAGT ATCGCTTGTT GCGACGTCTT TTGGAATGTA GCCAGCTTCA         900

TAGAATTTGT GAAGAGTCTT CAAGTGTTCT TTGAAACGAG GCACTTCGTA ACGGTTTACA         960

ACTTTAGTAG TATCGCCTTC AAGGTCGATA ACGAATGGAA GACCGTTTGC TACTGGGTAG        1020

TCAAAATTAT CAGATGGGAT GAAAACTTTA CCAATAGCAA ATGGTACTAC GTCTGGAGCT        1080

TTTTCTTTGA TTTGTTTCAA GACTGGCTCA AGAGTTTCGT AAGAAGTAAC ACCTGAAATA        1140

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GGGTCAAGTG CTTTGTAAAG GTCTTTACCT TCTTTTTTGT ACAATTCTGT CAAGTCAGCG        1320

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TCCAATTTGG CACCAACTTT TTCTTCAATG ATTTTGTTGG CATTTGCTAA CAATTCATCC        1500

AAGTTGTCTG GTTTGTCACC GATTTGGTAC ATTTTGATAA CAGGTTTGTC ACCTGAATCA        1560
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867

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GCAGCTTTTT TGCTGTTACC TGTCAAATTT CCACAAGCAG CAAGACCTGC AGCCAGAGCG    1620

ACTACACTAG CAGATGCAAA AGCATATTTT TTCCAGTTTT TCATGATAAA AACTCCTTTT    1680

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GAAGTCAGTT ACATATATCT ACGGCAAGGC GACGTTGACG CGGTTTGAAT TTGATTTTCG    1860

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ACTATTCTTT CACACCACCG ATAGTCAAAC CTTTTACAAA GTAGCGTTGG AAAAATGGAT    1980

ACAAAATCGC GATTGGAAGG GTTGCAACCA CAACCATGGC CATACGACCT GTTTCTTTCG    2040

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GGGCGTTGAA CCAGTCATTC CAGAAACCAA GAGCTGTTAA GAGCGTGATG GTTGCGATAC    2220

CTGGTAGTGA CAATGGCAAA CAGATTTGGA AGAAAATCCG GGCCTCACTG GCACCATCGA    2280

TACGAGCCGA TTCTAGAATG GCTTCTGGAA TGGTCTTCTT GAAGAAGGAA CGCATCAAGA    2340

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AGCGGAGTCA ACTGAGGAAT GGTTACGTTG CGAATACGTT GCCACTTGCT AGCTCCGTCC    3180

ACTGTCGCTG CTTCGTAGTA GGTTGGATCA ATTCCCATGA TCGTCGCATA GTACATGACA    3240

CTGCTATATC CAAAGCCTTT CCAAATACCT AGGAAAAGTA GGAGATAGGG CCAGATGCCC    3300
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868

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AGGTCAGCGT AGAAATTGAC TTCTTTGAGA CCAAGACTTT CCAATAGATG ATTGAACACC      3360

CCTTTATCAA TATTTAGGAA GGCATCTGTA AAGAAACTGA TGATAACCCA AGACAAGAAG      3420

TAAGGGAACA ACATAGAAGT TTGAAAAATC TTCACCATTC TCTTAGAACG GAGCTCGCTG      3480

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TAGTCTTTGA AGGCAACCAC GTTCCCAAAT ACTGGAATGT AAAAGAATAG AATCAACCAG      3720

AGTGCCCCTG GCAAAACCAT CAAGAGAAAG ATCCAGTTGT CTCTCAATGT TTTTGAAAAC      3780

TTTTTCATAA TTTCCTCCCT TTTTATTTTG ATATCCATCT AAAAATTCTT TTTTAGACTT      3840

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TGTCCTAAAT CAATTGTTTA TTTTATCTCT ATTAGCCCAG TGATGGCGTC ACTCTGTTAT      4020

AAGCATCCAA CAACGGGGTA TACTGAAAAA TCTCCAGACT AGGGAACTCA GCGATAGTTC      4080

CTAATCTGGA GATTTTTAAT ATGTTATTAG GCGTTTGCTT TCAACTTAGC AATAACCTCT      4140

TTAAGATTAT CAATCAACTC TGCTGCAGTA TGCTCAGAGC CTTTTTCATC TGCCAAGAAC      4200

AAAACTGCTT TTTGAAGTTC TTTTTGAGAG TTTTCAAGGA CATCCTTATC TACTGTTTCA      4260

AGGTTTGAGT CTTTAAGAAG TTTACTTAAT TCCTTGGCTA ATTTCTTGAG TTTGATTTGC      4320

AGACTCATCT TCTCCTGCTG TTTCTTTGCC CGCTGTTTGT CCTCCATCCT TAGTTGCTGA      4380

CTGGCTTTCC TTAATGGACT CTAGGGAAGC AATGGCATCT TTGACTGTTT GCAAGATATC      4440

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TATGAAATCA ACTAAAGAAG AAATCCAAAC CATCAAAACA CTTTTAAAAG ACTCTCGTAC      4680

AGCTAAATAT CATAAACGCC TTCAAATCGT TCTATTTTGT CTGATGGGCA AATCTTATAA      4740

AGAGATTATA GAACTTTTAT AGTAGTTTGA AATAAGATGT GAACATCTCT ATCAGGAAAG      4800

TCAAATTAAT TTATAGAAAT ATTTTAGCAG CCAAGGTGTA CTGTTATAGA TTCAATACAC      4860

TATACTTGGT GGTTTAGCTC G                                                4881
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(2) INFORMATION FOR SEQ ID NO: 126:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 13121 base pairs
            (B) TYPE: nucleic acid

869

(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 126:

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AGGATCCCCG GAAAAGGAGA CTAAAAATGA AGAAAAAATT TCTAGCATTT TTGCTAATTT        60

TATTCCCAAT TTTCTCATTA GGTATTGCCA AAGCAGAAAC GATTAAGATT GTTTCTGATA       120

CCGCCTATGC ACCTTTTGAG TTTAAAGATT CAGATCAAAC TTATAAAGGA ATTGATGTTG       180

ACATTATTAA CAAAGTCGCT GAGATTAAAG GCTGGAACAT TCAGATGTCC TATCCTGGAT       240

TTGACGCAGC AGTCAATGCG GTTCAAGCTG GGCAAGCCGA CGCTATCATG GCAGGGATGA       300

CAAAGACTAA AGAACGTGAA AAAGTCTTCA CCATGTCTGA TACTTACTAT GATACAAAAG       360

TTGTCATTGC TACTACAAAG TCACACAAAA TTAGCAAGTA CGACCAATTA ACTGGCAAAA       420

CCGTTGGTGT TAAAAACGGA ACTGCCGCTC AACGTTTCCT TGAAACAATC AAAGATAAAT       480

ACGGCTTTAC TATTAAAACA TTTGACACTG GTGATTTAAT GAACAACAGC TTGAGTGCTG       540

GTGCCATCGA TGCCATGATG GATGACAAAC CTGTTATCGA ATATGCCATT AACCAAGGTC       600

AAGACCTCCA TATTGAAATG GATGGTGAAG CTGTAGGAAG TTTTGCTTTC GGTGTGAAAA       660

AAGGAAGTAA ATACGAGCAC CTGGTTACTG AATTTAACCA AGCCTTGTCT GAAATGAAAA       720

AAGATGGTAG TCTTGATAAA ATTATCAAGA AATGGACTGC TTCATCATCT TCAGCAGTGC       780

CAACTACAAC TACTCTCGCA GGATTAAAAG CTATTCCTGT TAAGGCTAAA TATATCATTG       840

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ACCCTGGTTT TGATGCTGCT ATCAGTGCTG TCCAAGCTGG TCAAGCCGAT GGTATCATCG      1020

CTGGTATGTC TGTCACAGAT GCTCGTAAGG CAACTTTTGA CTTCTCAGAA TCATACTACA      1080

CTGCTAATAC CATTCTTGGT GTCAAAGAAT CAAGCAATAT TGCTTCTTAT GAAGATCTAA      1140

AAGGAAAGAC AGTCGGTGTT AAAAACGGAA CTGCTTCTCA AACCTTCCTA ACAGAAAATC      1200

AAAGCAAATA CGGCTACAAA ATCAAAAACCT TTGCTGATGG TTCTTCAATG TATGACAGTT      1260

TAAACACTGG TGCCATTGAT GCCGTTATGG ATGATGAACC TGTTCTCAAA TATTCTATCA      1320

GCCAAGGTCA AAAATTGAAA ACTCCAATCT CTGGAACTCC AATCGGTGAA ACAGCCTTTG      1380

CCGTTAAAAA AGGAGCAAAT CCAGAACTGA TTGAAATGTT CAACAACGGA CTTGCAAACC      1440

TTAAAGCAAA CGGTGAATTC CAAAAGATTC TTGACAAATA CCTAGCTAGC GAATCTTCAA      1500

CTGCTTCAAC AAGTACTGTT GACGAAACAA CGCTCTGGGG CTTGCTTCAA AACAACTACA      1560
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870

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AACAACTCCT TAGCGGTCTT GGTATCACTC TTGCTCTAGC TCTTATCTCA TTTGCTATTG    1620

CCATTGTCAT CGGAATTATC TTCGGTATGT TTAGCGTTAG CCCATACAAA TCTCTTCGCG    1680

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TCATCTTCTG GGGAATTCCA AACTTCATCG AGTCTATCAC AGGCCAACAA AGCCCAATTA    1800

ACGACTTTGT AGCTGGAACC ATTGCCCTCT CACTCAATGC GGCTGCTTAT ATCGCTGAAA    1860

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GTATCTCTTA TGGAAAAACC ATGCGTAAGA TTATCTTGCC ACAAGCAACT AAATTGATGT    1980

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TCAAGATGTA TGCAATCCTT GCTATCTTCT ATCTTGTAAT TATCACACTT TTGACTAGAC    2160

TAGCGAAACG CTTAGAAAAG AGGATTCGTT AATGGCAAAA TTAAAAATTG ATGTAAATGA    2220

TTTACACAAG CACTATGGAA AAAATGAAGT CCTAAAAGGA ATTACGACTA AGTTCTATGA    2280

AGGAGATGTT GTTTGTATCA TCGGTCCTTC AGGTTCTGGT AAGTCAACTT TCCTCCGTAG    2340

CCTCAATCTT TTAGAAGAAG TCACTAGCGG TCACATCACT GTGAACGGCT ATGATTTAAC    2400

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TTGCTAGCCA CTTCTACTAT CAAAGCCATG ATGTCAATGA TTCGGAACAT TATATTGCTT    3360
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871

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TGCGTCAATT ACAAGCTGAG CTTAATGAAA AATACCAAGC TGAACACAAT AAGCTCTTCT    3420

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TCAGGTCCAG TTACTACTGG AACATCTACT CGTCGGCCCC ATTCAGCTAG CTGAGCTACT    5100
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872

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GCACCCGCAC GGAAGGTATC TGCTGCAACC AGCATGACCT TCTTACCAGC TTGTTTGTAG    5160

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873

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ACCACCACTC ATGAGATTAA GAGACTGGAT TTTCTTGCCT GGTGGTTGGA CAGAAATTTC      7860

AACCCCAGCT GTCAGCAAGT CTCCTTCAGT CAAAATGAGG TCAGCCTGAC CTCCACCAAA      7920

CATCTGCTTG AAGGTCACTT TAAAGGACTC ACGAATGACC TCAAAGGTTG ATTTAAAGCG      7980

TTCCTTGACC TCATCATTCA TCTCTGTAAT GGTCTCAAGG AGCAGGTTTT TCGCAGACAA      8040

AATATCATCA CGTTGGCTAT TTAGGAAATC CAGACGGTTG TGAACTTCTT CGTACTGTTC      8100

AATAGCGTCT AAATTGACAG GACCCAGTGA GCGTATAGCC TTCTCTAAAT CCTTAACTTC      8160

TTGCTCTGCC AGATTGAGAT TTTCCAACTC ATGCGCCTTT TCTAAAGCTT CTGTGTAGCT      8220

GATCTGGTAC TGGTCTGTTA ATTGACTTTG TAGATGGCGC AAGCGCTCGC TAACCTTTTC      8280

TTTCTTGGCT TCAGCACGAG TTTGCTTGCG AATCCACTCT TCATTCTGCT GGCGAGCCTG      8340

ATCCAAATGA CTAGCAATAT CATCCAGTTG ACCCTCAATA TCATCCAACT CAAACTGCTT      8400

GCGAATCAAA CCTTGTTGGA GATTTGTTTT TTGAGTTTTG GATTCTTCCG CCTGTTGACT      8460

GAGCAATTCT GTATCAACCT TCTCAAGATT ATCAATCTTT TCTTGAAGAA GGCGCTGGAT      8520

TTCCTCTTGT TCAAAATCAA GATTGTCCAA TTCCTTGCCT AAGCGTTCAA TATCAGCAAC      8580

TTCATAACGT TTTTGCCCTT GCAGTTCTGT CTTAAGCAAA CGAGCTTGCG CTAGCTCTTC      8640
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874

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CTGCAAGTTT TGATAGCGTT CTTGGATGGC ATTTTTGTTA GACTTAATCT CTTCAATCTC    8700

AGCTTCCAGA TTTTGCTTGT CACTGGAGAT TGCAGCAAGA CGCTCTTGGC AGTTTTCCTT    8760

ATCCGCTTGC CAATCTCCCT CGGAAAGACG ATCTATTTCC TCTTCTTGGA GTTTCCAAAG    8820

AGTTTCCAGT TCTTCAACTT GCTGACTAGT TTGCTGATAA GCGAGGAACA AGCCTTGCTC    8880

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AGCCGTCGTA GCTAGCAAGT TCTTGAAAAT GGCTTCCAGT CTAGTATCAA AAGTCACCAA    9240

CTCATCTGCC ATCCCAAGGA AACCTGGGCT TACAGCGATA GCATCTTGGT TCTGACTAGA    9300

AATCGTACGC GCCTTGATAG TGGTCAAAGG AAGAAAGGTT GCACGACCGG CTCTGTTCCG    9360

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ACTTGCCCCT AAGGCAATCT CTAGGGCAGT TTGATAATAA ACATCAAAGG TCAGATGCTC    9480

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TGCATAAAAG TTACTATGAT TTCTCAGGAT ATTTTCCAAA CTTTGAGCTC TGGCCTGCTT    9600

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TTCTGTCGAC TCTAGTTCAG CCTTATTTTC CTTGATTTGA GCAACCAGAA CATCTAAATA   10380

AATAGCCTTA CGTTGTCCTT CCAAGTCTAA AAACTTACGG GCATTCTCAG CTTGCTTCTC   10440
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875

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AAGAGGCTTG ATTTGATTAT CCAACTCGTA GATAATGTCC TCTAAGCGGT CCAGATTATC   10500

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AGCAGCTTCT TCAAAAATAG CTCGTCGTTC CTCAGGCTTG GAATTAAAAA TCTCCTCAAC   10620

CTTCCCTTGG GAAATAATAG AGAAGGAATC TCGTCCCAAT CCAGTATCCA AGAAGAGGTC   10680

ATGAATATCA CGCAGACGGA CTTTCTTGCC GTCAATCTTG TATTCGCTAT CTCCACTACG   10740

ATAGACATGG CGTTCCACCC TGATTTCTTG ACCTGCATCC TTGATAAATC CGTCATGATT   10800

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GCTAATTTCT TAGAACGACC TTGGCCTTGA CCGATGCTCT TACCTTCAAC AAGAACTTCT   11160

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TCACGATTGC GACCACCTGA TTTTTCTTCC CCTTTACCCA ACTTGATAAA CTGGTCAAAC   11460

TGGCAATCAC GCGCAAAACC AGCTAAACTC TCCTCACGGA CAATCATAGC ACGGAGTTTT   11520

GATAGGTCAC CTTCAGGCTT TTTAGGATAT TTTTTATATA GATATTCTGA AATCAATAAC   11580

TGTAGAACAG CGTCTCCTAA AAATTCCAAG CGTTCATTGT GTGAAATTTT TAAGAGGCGG   11640

TGCTCATTGG CATAACTCGT ATGAGTAAAG GCAGTTTCCA GTAACTTTTT GTCTGCAAAT   11700

TCGATTGCAA AATGATTCTT TAGTACAGTT TGTAATTCTT TCATACCAAC CTCTTTCTAA   11760

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TGGAAAGCAT TTGGGAATTC TTTAGACAGA GATTCTCAGT TTTAGCGGCA AATTTGGGTC   11880

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ATCGAACCCC CATCTCAAGA ACCGGAATCT TACGTGATAT CCATTACACT AAGGGTGGAA   12000

ACTTGTTTTA TTATAACAGA AATTTGCTCT AATAACAAGT TTTTTGGTCA AAGACCCCGT   12060

CTTAGTGGGA AGCATCCCCA TTCCAGATGG AGTTTTTCAC GATCACATAA TCAACGTGTT   12120

TAAGGTCAGC AACCTGACGT CCACCTGCAT AAGAAATAGC ACTTTGAAGG TCTTGTTCCA   12180
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876

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TCTCAGTTAA AGTGTCTTGC AGATGACCTT TAGCAGGAAG CAAGATACGT TTGCCTTCCA    12240

CATTTTTGTA AGCACCTTTT TGATATTGTG AGGCTGAACC ATAATATTCT TTGAACTGTT    12300

CACCATCGAC TTCAATCGTT TTCCCTGGAC TTTCAATGTG TCCTGCAAAG AGGGAACCAA    12360

TCATGATCAT GCTAGCACCG AAGCGGATAG ACTTAGCAAT ATCACCGTGA GTACGAATTC    12420

CTCCATCAGC GATAATCGGT TTACGCGCAG CCTTGGCACA CCAGCGTAGA GCAGCCAACT    12480

GCCAACCACC TGTACCAAAA CCAGTCTTAA CCTTGGTGAT ACAAACCTTA CCAGGACCGA    12540

TTCCGACCTT AGTAGCATCC GCACCAGCAT TTTCCAATTC ACGCACAGCT TCTGGTGTTC    12600

CCACATTTCC AGCAATGACA AAGGTATCTG GCAATTCTTT CTTGATGTGT TGAATCATAG    12660

AAATCACGCT ATCCGCATGA CCATGAGCAA TATCAATAGT GATATACTCA GGAGTATCAG    12720

CCTTGAGCTG GCTAACAAAA TCATACTCAT AATCCTTAAC ACCGACAGAG ATAGAAGCAA    12780

TGAGCCCTTG ATTGTGCATT CGTTTAATAA AAGGAATGCG TCCTGCCTCA TCAAAACGGT    12840

GCATAATGTA GAAGTAACCA CCTTTAGCCA GTTGCTCTGC TACATTTTCA TCCAAAATCG    12900

TCTGCATATT CGCTGGCACA ACAGGTAGTT TAAAGGTGTG ATTTCCTAAA GTGACACTTG    12960

TATCCGCTTC TGCACGGCTT TTAATGACAC ATTTATTTGG AATCAATTGA ATATCTTCGT    13020

AATCAAAAAT TGGAAATTCA TTTAACATAT CGATGTCTCG TTTCTTTTGT AATGACCTAC    13080

CTATGCTCTT GCATCACTAC GCCTTTTCCG ACGTTTCCTG G                        13121
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(2) INFORMATION FOR SEQ ID NO: 127:

     (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 9578 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 127:

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CCGAATGCAA TGTTTACGGT TGAACTTGAA AATGGACATC AGATTTTAGC AACAGTTTCT     60

GGTAAAATTC GTAAAAACTA TATTCGTATT TTAGCGGGAG ATCGTGTTAC TGTCGAAATG    120

AGTCCATATG ACTTGACACG TGGACGTATC ACTTACCGCT TTAAATAATC GAAAAACTTG    180

GAGGGATAAG AAATGAAAGT AAGACCATCG GTCAAACCAA TTTGCGAATA CTGTAAAGTT    240

ATTCGTCGTA ATGGTCGTGT TATGGTAATT TGCCCAGCAA ATCCAAAACA CAAACAACGT    300

CAAGGATAAG ATAGAAAGGA GAAACATGG CTCGTATTGC TGGAGTTGAT ATTCCAAATG     360

ACAAACGCGT AGTAATCTCA TTGACTTATG TTTATGGTAT CGGACTTGCA ACATCTAAGA    420

AAATTTTGGC TGCTGCTGGA ATCTCAGAAG ATGTTCGTGT ACGTGATCTT ACATCAGATC    480
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877

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AAGAAGATGC TATCCGTCGT GAAGTGGATG CAATCAAAGT TGAAGGTGAC CTTCGTCGTG       540

AAGTAAACTT GAACATCAAA CGTTTGATGG AAATCGGTTC ATACCGTGGT ATCCGTCACC       600

GTCGTGGACT TCCTGTCCGT GGACAAAACA CTAAAAACAA CGCCCGCACT CGTAAAGGTA       660

AAGCTGTTGC GATTGCTGGT AAGAAAAAAT AATATAGGAG GTAAAAGTCT TGGCTAAACC       720

AACACGTAAA CGTCGTGTGA AAAAGAATAT CGAATCTGGT ATTGCTCATA TTCACGCTAC       780

ATTTAATAAC ACTATTGTTA TGATTACTGA TGTGCATGGT AATGCAATTG CTTGGTCATC       840

AGCTGGTGCT CTTGGTTTCA AAGGTTCTCG TAAATCTACA CCATTCGCTG CTCAAATGGC       900

TTCTGAAGCT GCTGCTAAAT CTGCACAAGA ACACGGTCTT AAATCAGTTG AAGTTACTGT       960

AAAAGGTCCA GGTTCTGGTC GTGAGTCAGC TATTCGTGCG CTTGCTGCCG CTGGTCTTGA      1020

AGTAACAGCA ATTCGTGATG TGACTCCAGT GCCACACAAT GGTGCTCGTC CTCCAAAACG      1080

TCGCCGTGTA TAATCATCGC ATTACACTGC TTTTCGTTTA AGAGGGAGTA ACTAAATGAT      1140

CGAGTTTGAA AAACCAAATA TAACAAAAAT TGATGAAAAT AAAGATTATG GCAAGTTTGT      1200

AATCGAACCA CTTGAACGTG GCTACGGTAC AACTCTTGGT AACTCTCTTC GTCGTGTACT      1260

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AATTGCAGTG AAATCGTACG TTGAAGACGA AAAAATCATC GAACTGGATG TTGAAGGTCC      1440

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TGGTCGTGGA TATGTACCTG CTGATGAAAA TAAAAAGGAT AATGCACCAG TTGGAACACT      1620

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GATGATGAAA GTACGAAATC TTGGACGCAA GAGTTTGGAA GAAGTGAAAC TCAAACTCAT      2040

TGATTTGGGT CTTGGATTAA AAGATAAATA AAGGAGGAAT ACATGGCTTA CCGTAAACTA      2100

GGACGCACTA GCTCACAACG TAAAGCAATG CTTCGCGATT TGACAACTGA CCTTTTGATC      2160

AACGAATCAA TCGTGACAAC TGAAGCTCGT GCTAAAGAAA TCCGTAAAAC TGTTGAAAAA      2220
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878

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ATGATTACTC TAGGTAAACG TGGTGATTTG CATGCACGTC GTCAAGCAGC TGCTTTCGTA      2280

CGTAATGAAA TCGCATCTGA AAACTATGAT GAAGCAACTG ATAAGTACAC TTCTACTACA      2340

GCACTTCAAA AATTGTTCTC AGAAATCGCA CCTCGTTATG CTGAACGTAA CGGTGGATAC      2400

ACTCGTATCC TTAAAACTGA ATCACGTCGT GGTGATGCAG CGCCAATGGC GATCATCGAA      2460

TTAGTATAAA ATCATCAATT TTGTTGAGTG TTATGATGAT GGAGTCTTGT GCTCTTAGTC      2520

TAGCTCTGGT CTACCGCTAG GATTTCGGTC CTAGCGGGAA CACTCATCAT AAGTTGGGAT      2580

AGTAGACGCT TGTTTACGAA ATTGTTTTTT TCTTAAGAAC AACTTCGTAA GCAGGCGTTT      2640

TTGAGTATTT TCGTTAGAAT TATGCTATAC TATTTGAAAA GAATCCTGTT TAATGTTAAG      2700

GTTTCTTATT TTAAGAAGAA TTGGAGTTTA CTTATGAAAG CCATTATAAC TGTTGTTGGT      2760

AAAGATAAAT CTGGAATTGT TGCAGGTGTT TCTGGTAAAA TTGCAGAATT AGGATTGAAT      2820

ATTGACGATA TCTCTCAAAC TGTCTTGGAT GAATATTTTA CGATGATGGC TGTTGTATCT      2880

AGTGATGAAA AGCAAGATTT TACCTATCTT CGTAATGAAT TTGAAGCTTT TGGGCAAACT      2940

TTGAATGTAA AAATCAATAT TCAGAGTGCA GCGATTTTCG AAGCTATGTA TAATATCTAG      3000

GAGGTCATCA TGGATATTAG ACAAGTTACT GAAACCATCG CCATGATTGA GGAGCAAAAC      3060

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AATCGTGCTG CGGAGAAAAT CTATCAAAAA ATTACGACAA AGGCGGCTAA TTTAGTAGCT      3180

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GGAGACTCTG TGGCACGTGT CCTTGAGGAA ATGGGGCTAG AAACAGTTGG CACGCATGGA      3900

ACGACGGCTG CCTTGGCCCT CTTGAACGAC CAAGTTAAAA AGGGTGGAGT GATGGCCTGC      3960

AACCAAGTCG GTGGTTTATC TGGTGCCTTT ATCCCTGTTT CTGAGGATGA AGGAATGATT      4020
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879

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GCTGCAGTGC AAAATGGCTC TCTTAATTTA GAAAAACTAG AAGCTATGAC GGCTATCTGT        4080

TCTGTTGGAT TGGATATGAT TGCCATCCCA GAAGATACGC CTGCTGAAAC TATTGCGGCT        4140

ATGATTGCGG ATGAAGCAGC AATCGGTGTT ATCAACATGA AAACAACAGC TGTTCGTATC        4200

ATTCCCAAAG GAAAAGAAGG CGATATGATT GAGTTTGGTG GTCTATTAGG AACTGCACCC        4260

GTTATGAAGG TTAATGGGGC TTCGTCTGTC GACTTCATCT CTCGCGGTGG ACAAATCCCA        4320

GCACCAATTC ATAGTTTTAA AAATTAAGAA AATAGGAGAA ATTTTAAGTT CTATTTAAGA        4380

TTAGACGTGT ATACTATAAT CATTAAATAA AGACCTCCTA ATATTATTTG AAACAGATAA        4440

CACTGAATTA GTTTGAATTT GATTTTCATC TAATATCTTT ATTTAATGAA CTCCTAAACT        4500

TTTTCATAAT AATCTCCTTC AAAAGTCGCC TGTATGGGTG GCTTTTATTT TATCATTCAT        4560

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TGTGACTCAA GATAAGATGG CTCCAGAAAT GATACCAGAT AGCATCATTG GAGTTGTAAT        5640

CTTAGCAAAG GTATTGAGAC GACTACTTCC TAAGCTTTCA GCAGCTTCTT CAATACTTGG        5700

TGCTATTTGT TGTAAGCTAG CAACAGATGA GCGAATAGTA TAAGGTAATC TTCTGGCAGA        5760
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880

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ACCAGTATTG AAGGAAGAAA TGAAGGCAAT CCCTAGAACG GTTCCTGGTA CAATATAAGG      5880

TACCATACTG AGGCTGTCAA TTAAGTTTGT AAACAAATTC CGTTTTCTAA CGGCTAGGTA      5940

GGAGATAAAT GTCGCAAATA GAACAACTAG AACTAAGGCA ATCAAAGGGA TACGAATGGT      6000

ATTGAAAATA GCAGATCCCA TACGATGGAA AGCTACCTTG TAACTGTTTG GAGAATAACC      6060

TTTAACAGAT ACCATACCTG ATGTTTTTAG GAAAGAGGTA TAAATTAAGT AGATTTGAGG      6120

TAAAACAGAG ATAAAGATAA TTCCGTAGAC TGTTGCATAA ATGGCAGCCA TTTTTCCTTT      6180

TGTAGTTTTT TTAGGCTCAA TTGGATGGAG CAGATTCATG CTGAAACTGT AGCGGTTTGC      6240

AATGTGTTTT TGGATAAGGA AAAATTGCCAA GGCAATGATA ATCGCCATAA TTGCAAAAGC      6300

AGAATTTCCT CCAACCTCGC TAATAAATTG GGTATAAATC AGGACAGGGA AAGTCCGATA      6360

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ATTTAGTCCA AGATAGACGC TATCTCTAAT AGTTCCTTCA ATATCTCCAG ATTCATCTTT      7260

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TTTATGATAG AGTTCTTTTG GTCGGCCGAT TTGTTGGATC ACCCCATCTT TCATAACAGC      7500

AATTTGGTCT GAAATAGCCA TGGCTTCTTC TTGGTCGTGG GTTACATAAA CAGTTGTAAT      7560
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881

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TCCCACTTCG TGTTGGATTT CTCGGATGGC TTGACGCATA TCCAAGCGAA GTTTGGCCTC      7620

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ACTAGATGAA CTTGAACCGA TTTTACCATC AATAAGTGTG AAAAGATCTT TTACATAAGA      8580

CCAAGCCTTA TCATCTTTGT AACCACCTTG AGCTTGTAGC ATATTTGTTA ATTGAGCAAA      8640

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AAGATCGTTA TATCCTTCGA TGTTCATGCC TTTAGTTAAA TCAGGGTTGA CGATTAAAAC      8760

ACTACCATCT AGTGTATAAG GAGTAGAGTA GCCAGTTGTG TTTTGATATT CTTTGATAAC      8820

ATTATCATTT TCTTTTGAAG TATAGTTTTC AAAGAGTTCT CCGTGGGTAG TATATTGTGT      8880

ATAAGAACCA CCAAAGATAA CATCAGCTAC AGGAACTTCT TTTTCTGACT CTAGTTTTTT      8940

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GCCGTCTCCT TTATCAGATG AACTGTCATC GGCAGATTCA TTAGAAGAAC AAGCAGCATA      9120

ATACATCCAT TTCTTTTTCA TGATGGATAC CTCCGTTGTG TTATTTAAGT TTATTTTAAA      9180

ACAATGTAAG CGTTTTTAAA ACATACAATT CTATTCTATA GTGTATTGAA TCTATAACAG      9240

TACACTTTGA CTGCTAAAAT ATTTCTATAA ATTAATTTGA CTTTCCTGAT AGAGATGTTC      9300
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882

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ACATCTTATT TCAATTCACT ATATTAGAGT AAAATTCTCT ACAAAAAGAA GAATAGCCTA        9360

TTTTACTATT CTTCTGAGTG ATTTCAATTC CTTTGGGGAA ATATGGAGAT ACTTTTTAAA        9420

TCCTGACAAA TGGTTGTTTC TTTTTCTAAA TCGGTGATAC TGTATCGGAG AATGCGCGTG        9480

AGGTCACAAA GGCTGCGATA GAGCTTCTAT GGAGAATTTC TTTTTGGAGA GATTTTTTAA        9540

AGGAATGAGA CATCCGCTAC CTCCTTGGAA GGTTTTTG                                9578
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(2) INFORMATION FOR SEQ ID NO: 128:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 13440 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 128:

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CGGGCTGTTG TGACGATTCT TATTTCTATC TGTGTTATCT TTTTGGGAAC TATTTTGGGT         60

GTTGTCTTGG CTTTTGGGCA ACGTTCAAAG TTTAAACCGC TTGTTTGGTT GGCCAACTTG        120

TACGTTTGGA TTTTCCGTGG GACACCGATG ATGGTTCAAA TTATGATTGC CTTTGCTCTT        180

ATGCATATCA ATGCTCCGAC TATTCAGATT GGAATTTTAG GTGTTGATTT TTCGCGTCTG        240

ATTCCAGGGA TTTTGATTAT CTCTATGAAT AGTGGTGCTT ATGTTTCGGA GACTGTTCGT        300

GCCGGAATCA ATGCGGTTCC AAAAGGTCAG CTAGAACCCG CTTATTCGCT AGGGATTCGT        360

CCTAAAAATG CGATGCGTTA TGTGATTTTG CCACAAGCAG TCAAAAATAT CTTGCCAGCA        420

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CTTTTATTTG CAGCATTTTA CTACTTGATT ATGACCTCTA TTCTGACAGT AGCCTTGAAA        600

GCTTTTGAAA AACATATGGG ACAAGGAGAT AAGAAATAAT GACAGAAACC TTGATAAAAA        660

TTGAAAATTT ACATAAATCC TTTGGAAAGA ATGAAGTATT GAAGGGCATC AACCTCGAGA        720

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AACAATTCAA TCTCTTTCCT AATATGACTG TGATGGAAAA TATCACCTTG TCCCCTATCA        960

AGACCAAAGG TGACAGTAAG GCCGTTGCAG AGAAAGAGC TCAGGAACTT TTGGAAAAAG       1020

TTGGTTTGCC AGATAAGGCA GACGCTTATC CACAGAGTTT GTCAGGTGGC CAGCAACAGC       1080

GGATTGCCAT CGCGCGTGGG TTGGCTATGG AACCAGATGT TTTGCTCTTT GACGAGCCAA       1140
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883

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CAGAGCTTTT TCTTATAGTT TAAAGCTATA GGATTGCCTA GGAAAGAAGT GTTAGAGCTA      1500

CATTGTATTT TTTGGTATAA TTAAAGATAT TTGTAAGAAA AGAGAAGTGA TATGACACAG      1560

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ACAGTAACCT TGACTCACTC ACGTACTCAT AATCTTTCCA AGGTGGCTGC AAAAGCAGAT      2160

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GGTTAGTGAC TTCAGACTAC TGTAGTCATA CTACGACTAT AGATGCAGCG ATTTCTATTT      2880
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884

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885

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ACCAAGTTTC CGTGAAAAAG ACGGCCAACG TTTTGTGACC GATATGCAGA ATTTTATCAT      5040

TGACCTCGCC TTGGATGTCA TTGAAAATCC AATTGCTTTT GGACAAGAAT TGGACCATGT      5100

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887

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889

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ATCTACCGCC ATACTTTCTC TGACTTTTCC ACGGTATTTA AGATAACGCT TAAAGGCTCT    12840

AAAGAGACAG GTCAATGGCG AAAAATTGAG AAAGATGATT TGGTCAGCTT CTTGCATTCG    12900

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TTGGAGTGTG TCCATGTGCA GTTTTGGAAT GGAGTAGTAG TTAGATAACT TTTCTGCTAT    13080

AGTTGACTTA CCAGAACCAG AATATCCGAT AATTGCGATT TTCATTTTCT ACCTTTTCCT    13140

ATTTGGAGAC AAAAAAACAG CCTCTATGGA CTGTTTCTTA TTTAACAAGT TTAGCTGAAA    13200

GACGAGCTTT ATCGCGGCTT GCTTTGTTTT TGTGAATCAA ACCTTTAGTT TCTGCTTTAT    13260

CGATAGCTGA GCTAGCAGCA CGGAAAAGTT CTTCAGATGG GTTTGCTTCG AAAGCTTTTA    13320

TAGCAGTACG CATAGCTGAT TTTTGAGCTG AGTTCTTTTC GATTCGTCTA ACGTTCAATT    13380

CAGCGCGTTT GATAGCTGAT TTAATGTTTG CCAATGGTCT TACCTCCATA TTTACTAACT    13440
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(2) INFORMATION FOR SEQ ID NO: 129:

890

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 8512 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 129:

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CCTTTTTTCA AAAACTAGAT ACTAGTCTAT CAAAAGTAGG AAAGGGTTTC AAGAAAATTG      60

ATTGGAAATT TTTTGAAAAT CATAGAACTA TTAGCTAATC CCTAGTATTG AAAAGACTGG     120

ATAGCTTCTT TCAGGTCATC TTGTAAACTA TTTCTCTGGT CAAGTTGGAC ATAGACTTCC     180

ACCAGACAGG ATCTAAAGTT GGAAAATTTG TAAAAATCCT CCCTTTCTTC TATCGGAAAA     240

TCAACAGTTT TTATCCAAGA AGCTACTTGT TCTTGCTCCA ACTTCCCTTG TAAAATAGGT     300

TCATAGATCA CTCTTGCTAA ACGCCAATCC TCATCATCTG TAAAGCGAAT CGACATTCTT     360

TTAAATAGTT GGCCAAGTAT ATCAAATACT TCATGAACTC TGTTTTTAGG AAAGTCTGGA     420

TGACAAACCA CCTCTGTCAG TAAATCGGCT CCATGTGCAA AAGCGTGAAC CCAACCATAC     480

TGACTTGAGA AACCCCTTGT ATCCTTTTCT TTTGAAAGAT AGTGCAAGCC TTGATTTAAA     540

AGGACATTAC GAATTTCTGG AGAAGGATTT CCCAAATGAT CAAACAACCA CTGGATTTCT     600

TCCTGGTTAT AATTTGGTTT TTCTTCTCCT ATTTTTCTTA GTAAATCTTG ATACATGGTC     660

AATACCTCTA CATTTCTAGC AACTGTTCAA AAAGGCAGTC TTAAATGACT CAATATTGAA     720

TTCTCAATTA AATACAATCT GATATAAAAT GACGTAAATA ACTATCAATA CCAGTTCTAC     780

AGTAAGTTCA AATTTAACAT CACGACCTTC AACGACATTT TTGAAAATAG CTACAACTAA     840

GACAAATAGA ATGACGCTTA ACAAGCCCAT AAACATCATT CTAAAAAATT TTTCTATTCC     900

CCTACTCTCC CAACTCAGCA CTATAGGAGA TAATCTGGTC AACTGTGTCA GACAAGAATT     960

GGATGGTATC ACGGAGTGGT TTGTCTGTTG AAATATCAGC ACCGATAATC ATGGCTGACT    1020

CAAGTGGTGT CTTGCTACCA CCTGATTTGA GGAGATTGAG CCAGTCTTCA GCTCCAGTTT    1080

CAGAATGTTT TAGATGAAGG TAACCAGCAG TCGAGATAAC TAGTCCTGCT GAGTAAGTGT    1140

AACTATACAA GCCCATATAG TAGTGAGCTT GGCGCATCCA AGTCAGAGTT GCATCATCGT    1200

CAATTTCAAT AGCATCTCCC CAGAAATCCG TCAAAACTTC CTTCATAATG CTGTTGAGCT    1260

TGCTTGCTCC AAAGGTCTCC CCTTCTTCAA TCAATGTATA CACCTTACGC TGGAAGGCGG    1320

CTTCCAAGAG GTGGGTGATA AAGTTATGGA AGTAGGTGTC TGTCAAGCGA TGAGCCAGAG    1380

CGAAGCGTTT TTGACGTGGG TCATTAGACT GGTTCTCCAA GTAATCACTG AGTAGCAATT    1440

CATTGAAGGT TGACGGTGCT TCAACATAGT AGGTCGACAT ATGGGCATTG AAGTAACTTT    1500
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891

GATGATTGTC TGAAAAGATG AATTGACCAG AATGCCCGAT TTCATGAATC AAGGTATAGA   1560

CATCGCTCAA ACGGCCTGTC CAGCTCATGA GTACATAAGG GTGTACGCGA TATGGGTCCG   1620

CCGCATAACC ACCGGAATCC TTGCCACTGT TAGCAGCAAA GTCCACCCAG CGCTCTTCTT   1680

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AGAGTTTTTC AGACTTGACC TGAGCCAGAT AGGCTGCTGC AGCCGTATTT TGGTGCTTAC   2040

GAAGTCCCTC TGAGAAGGAA CGGAAGGATT TCTCACGAAC CTCAGCATCC TCATGGTTTT   2100

GGTAGAAATT CTCATAGGTC ACAAAGCTGT TTTTGTAGGT CTTGCCATGG GCTTCAAAGT   2160

CAGCCATTTC AAAATCCCCA GCTCGCATCT TAGTATAAAT GTCCTGCGGA CTGTAGAAAA   2220

CTTCACCGAG ATTTGTCAAG GCCTTCTCCA CATCTGCCCC TAAGTAGTGG GCTTTTTTGA   2280

TTTTAGCCTG ACGAATGGCA GCTGTTAAAT GTGGCAATTT ACCCAAACGG TCCAAGACTT   2340

CCTCATCTGC TGCCACCAAG GCATCGTCAA AGAAGGTCAA GGCTACGCTG GCATCTGTTT   2400

CAAATTCCAT CCCAGCTTGG GCAATATTGG CAAATTCGTC ATTGCTATAG TCCGTCGTCT   2460

GAGGCATAAA ACCATAGTTG CCAATATGGC TCATCTGAAT GTAGATCTGT TCCAATTCCG   2520

CAAAGGCCTT CTCGAAATCC TCAAAAGTGT GAAGATTGCC CTTGTAATCA CGGCTAAACT   2580

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TCTTCCTCTT ATTTCTCTAA TTCTACTAAA ACACTAAGGG CTGATAAAGC GTAAAGCGGT   2760

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GCTCCTGTTT CAAGACCAGT GACTGCTTGC AGAAGCGCAG CGGCTTCTCC TTCTTTAGCT   2940

GATTCTTCAT AGGCTACTAT GATAGAGTCA AACTGGTCCA GCTGAGCTAG AAAATCTGCT   3000

TTTTTCTCGA AAAGTTTAAT ACTTGGTACA ATATTACGCT TGCTTTGCTC GGCTGCTCCA   3060

AGGGCAATTT TTTCTAGTTT TTCAACTTTT TTACCCAATT TCTTGCCATC CCACTTGGCA   3120

ACTGACCAGT CTGCAGGAAA GGCCCAGATT TGGCTAGCCC CCAGTTCGGT TACTTTTTGA   3180

GCGATGAACT CCAGCTTGTC TCCCTTGGGA AATCCAGATG CGATGGTCAC TTGGACTGGT   3240

892

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AGTTCCACAT TGTCATTTAA TTCTTGGACC AACTCAAACT GACGATTTTC CATATCCAGC     3300

ACGCGCGCCA AGCGCTTGAT GCCATCATCA AAGACTAAGG TAACCTCATC CTCTTCTTTC     3360

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ATAGCACTGC CTTTTACAAA ATACTGCTGC ATGCTAGCCT CCAATCACAC CAGAGATATC     3480

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AAATCCAGCT GACTCAGCCG ACTGGCGCAC CATGTCCAAC TTGTCCTTGA TAATGCCACT     3600

CATGATCAGG TAGCCTTCAT CCTTTACCAA GCGATAAGCA TCGTCTATTA GATGAATGAG     3660

GATATCCGCC AAGATATTAG CCACAATCAC ATCTGCCTCA ATTTCCACAC CCTTAAGCAA     3720

ATCTCCAGCC GCTACATGGA TATTTTCCAT GCCAGGGTTG AGCTCAATAT TTTCCTGAGC     3780

CACACGAACC GCCACATCAT CCAGGTCATA GGCGAAAATT TCTTTAGCCC CCAGAAGCGA     3840

GCTGGCAATA GAGAGAACCC CTGAACCAGT CCCCACATCT AGCACCGTTT CGCCACCACG     3900

AAGAACCTGT TCCAAGGCAA AAAGGCTCAT CTTGGTAGTT GGGTGGGTTC CAGTACCAAA     3960

AGCCATGCCA GGATCCAGCT TGATAATCAT TTCCCCCGCA GTCGCCTCAT AGTCTGTCCA     4020

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CGTGTCAGGG TAGTAGGCTG TCACTACGAT TTCTTCTTGC TGCTCCACCT CTGGGAAAAT     4260

CTCTCCAAAG CGGTCCACAT TTCCCACATA GTCCATACTG TCTTCGATTG CGACTCCTTG     4320

CGCTCCCAGC TCAATCAAGA GATTGGAAAC CAACTCCTCT CCCTCACGCT TCACTGTAAC     4380

TTTTAACTCT TGCCATGTTT CCATTATTAA TACCAAGCCC GTAAAACACA AAACCAAAAT     4440

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CCGAGCGCAT TCAAAAGGGC TTTCGTCCCC TTCACGGCCA CCACCTGGCA GTTCCCACAT     4860

ATTGGCCCAG GGAATACTTG CCTTATCATC GCGTAAGATA GTCAAAAGCT TATCCCCACA     4920

AAACAAAGCA ATCTTGCAAC CTGTGAAATC AGAAATTTCT AGTTCCATCT TCAGTTCCTT     4980

CTAACATTTC CTTTTCCAGC TCGGCTAACC AGTTTTCATA ATATCTTTTC TCATCCCTCA     5040
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893

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ACATTCGACT ACTATCCATT TTCTGTCTAG CAATCTTGAG AGCCTTACGA GTTCGATCTA      5100

CATCTTTCTT CACCTTTAAT TGATACCAGG CTTGTATCAC TTGAAGATTG GACAGTTTGA      5160

GAGACAGAAA CGATTTGACC TGTCGAATAC TAGCATATTG CTCCGCTTGC TCAAAATCTC      5220

CTTCCAACAA GGCGATATGA AGCAGGGATA GTTGGGCAAC TGTCTGCATC ATCGGAGTAG      5280

TTGTCCTCTC AAGTAATGCT TGAAACTGCT GTTTAGCTAC TTCTTCCTTC CCTTCCAAAA      5340

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GAAAGGGCTA ATAAATCTAT AAAATCAATA GGCGAGTAAC TAGCACAAGT GGACGTGCTT      6780
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894

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TTTTATTGAC TATTACCACG ATACCACGCT TAATCTTAGG CTTGAACTTT CTTATCTGCA    6840

ATAGCGTCTG TCAAAGTCTG AGAAAAGTTA AGCCCCATTT CTCGTCCCAA CTTATCTGCC    6900

CATTTTGGTA TGGTCAAAGT CTTTTTAATG GGTTCCTGAC TTCCTAGGTA TTCTGATACA    6960

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GCCAAAGCCT CAGAAATCCC CTCTCCTTGT GTAGCTGAGT ATTCAAAATC TGGGAAATGG    7200

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TCCCCTTGCT TTTCCATTTT AATATGGGAG CCTTTACCGC CTCTAGTCTT TATCCAACCA    7440

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AAATAGTAAA AAAGATTCTA TCTCACTCCC TGATTATTAC AAAACCATTG AAATATCACA    8400

ACTAATAGGC TAGAATGGAC ATAGTAAGAT ATAGTAGATG AGTCATTCTA CTCAAATCCA    8460

CGTTAGAAAG GACTGCTATG CCAGACAATC TCGCCGTTCG CATGCGCCCn GG            8512
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(2) INFORMATION FOR SEQ ID NO: 130:

895

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(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 2869 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear


(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 130:

CTCGTTTCAA GGTTGAGTCT CTTGCAAATC TTGTTCGCGT TCTTCCTTTT GCCAAGGCAT      60

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TACAGGAGTG ATTkTCTTTT TTTATCCGAT GATAAATGTG TTATAATAGG TAGCGAAAGA     240

GGTGAAGAAA TGAATCAAAC AGTAGAATAT ATCAAAGAAC TGACAGCCAT TGCGtCGCCA     300

ACAGGCTTTA CTCGTGAGAT TGCGGACTAT TTAGTCAAGA CTCTAGAAGG TTTTGGTTAC     360

CAGCCGGTTC GCACATCCAA GGGCGGTGTC AATGTAACTA TTAAAGGTCA AAATGATGAG     420

CAACATCGCT ATGTGACTGC CCATGTAGAT ACGCTTGGTG CTATTGTCCG TGCTGTCAAA     480

CCAGACGGCC GTCTCAAAAT GGACCGTATC GGTGGCTTTC CTTGGAACAT GATTGAAGGA     540

GAAAACTGTA CCATTCATGT GGCTAGCACA GGTGAAAAAG TATCAGGAAC CATCCTCATC     600

CACCAAACTT CTTGCCATGT CTATAAGGAT GCAGGAACTG CAGAACGCAC GCAAGACAAT     660

ATGGAAGTGC GTTTGGACGC CAAAGTAACT AGTGAAAAAG AAACTCGTGC TCTTGGCATT     720

GAGGTCGGTG ATTTTATCAG TTTTGACCCA CGAACTGTCG TGACAGAGAC AGGTTTTATC     780

AAGTCTCGCC ATTTGGATGA CAAGGTCAGT GCGGCGATTT TGCTCAATCT CCTTCGCATT     840

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GAAGTGGGAC ACGGTGCAAA CTCTAACATT CCTGCTCAGG TAGTAGAATA TCTGGCTGTG     960

GATATGGGAG CCATGGGAGA TGACCAGCAA ACAGACGAAT ATACAGTGTC TATCTGTGTC    1020

AAGGATGCTT CTGGACCTTA TCACTATGAC TTCCGTCAAC ATTTGGTGGC TTTGGCGAAA    1080

GAGCAAGATA TTCCATTTAA GCTGGATATC TATCCATTTT ATGGTTCGGA CGCTTCAGCG    1140

GCTATGTCTG CAGGGGCAGA AGTCAAACAC GCCCTTCTCG GTGCTGGTAT AGAGTCTAGC    1200

CATTCCTATG AGCGTACCCA TATTGACTCG GTGATCGCAA CAGAACGAAT GGTCGATGCT    1260

TATCTTAAGA GCACGTTGGT GGACTAATAT GTGCCTTATT TGTCAGAGAA TTGACCTCAT    1320

CAAGAAGGAA GAAAATCCTT ACTTTGTCAA AGAGTTGGAA ACAGGCTATC TTGTGGTTGG    1380

AGACCACCAG TATTTTGAAG CTATAGTCT CTTTCTAGCC AAGGAGCATG TCAGCGAATT    1440
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896

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GCACCATTTG AAAAAGGAGA CAAGACTCCG TTTTCTAGAA GAAATGAGTT TAGTCCAAGA    1500

GGCAGTTGCC AAGGCCTTTG CTGCTGAGAA AATGAATATC GAACTGCTAG GAAATGGCGA    1560

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CAAGGGTCGT GGACCAGTCT GGTGGGTTCC CTTTGAAGAA ATGACAGCAG AAACCTGCCA    1680

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ATTAGAAATA AAGGAGTAGA AATGAAGAAA AGATACCTAG TCTTGACAGC TTTGCTAGCC    1800

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GATCATTACA GTGGTTTTAG AAGTTATGAA ACTCAGACCA AGCTCTATCA AGATTATGTC    2160

AACCAAGATG GAAAGGCAGC AGCTGACCGT TACTCTGCCC GTCCTGGCTA TAGCGAACAC    2220

CAGACAGGCT TGGCCTTTGA TGTGATTGGG ACTGATGGTG ATTTGGTGAC AGAAGAAAAA    2280

GCAGCCCAAT GGCTCTTGGA TCATGCAGCT GATTATGGCT TTGTTGTCCG TTATCTCAAA    2340

GGCAAGGAAA AGGAAACAGG CTATATGGCT GAAGAATGGC ACCTGCGTTA TGTAGGAAAA    2400

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ATAATGGATG GGTATGTGAA AAACATACTT GTGGGAGGTA AAAATCTCTA ATTACCGCCA    2760

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TCCCTGCTGG TAAAGCTACA CCAGCTCCAC CGGTTGGACC TGCTCTTGG              2869
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(2) INFORMATION FOR SEQ ID NO: 131:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 6186 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 131:

897

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CTGAATCCCT TATAGGAGTC CAGTAACTTT TTAGCCTCTA CTTTGCCTTC ATAGGCAGCT        60

TCAACATCAT TAAAAAAAGA ArGCACTGAA GCAAGTTCTT CAGTGCTCCA CGACAAATCT       120

AGTGGGTAAC TATACTGTTT GTTCATTAAC TAATACCAGC TCTCATTCTT GCTTCTTTTA       180

GTTCTTGCTT ACGATAACTA CGAGGGAGAA AAGCACGAAT CTCATCTTCA TTAAAACCGA       240

TTTGCATACG CTTGGCATCA ATAATAATTG GACGACGCAA AAGACTAGGA TACTGCTCAA       300

TCAAATGAAG CAATTCCGAT ACCGAAATAC TCTCTACATC AATATTCAAT TTTTGAAAAA       360

TTTTTGAACG AGTTGAAATG ATGTCATCAG TACCATTTTC GGTCAAGGAA AGGATGTGTT       420

GCAATTCTTT TCTTGTTAAA GGACTGGTCA TAATATTGTG TTCCACAAAG GGAACTTATG       480

TTTTTCTAAC CAGGCCTTAG CCTTACGACA TGATGTACAG CTCGGTGATA GAAATAGTGT       540

AATCATGCTT TTCTCTTCTT ATCTATACTT TGCTACTTCT ATTATACAAA AAAATAAAGC       600

GCTTGACTAG GGATTTTTAG AAAAAAAGCC TATTTTTTCA AGAAAAATAG GCTTTTTGCG       660

AACGATTGAC ACAATTGGAT TTGGTTAATT CACTCTTAAC GATGGTTTTA AACGATATAT       720

ATTTTTATAT ATGTAAATTA AAAACATCTT TCCTTTCACT TCCTACGACT TTTCAGATAC       780

AGATAGCCAA AGAAGTTTTC ATAGAGGGCA AAAAAGAGGA GGAAGGCATG AAGAAAGAAG       840

GTCTCTGGCA AAATCATAAT AACAGGATCC TTGGCTGGAT CAAAAAGCCA GGTATCATCT       900

CCCACAAAGA GAATTTGATG GAAAAGAGTA AAGAATTGGT CAAAACCAAT CAAAACTCCC       960

CCAAGTCCAA TCATCACAGG TAAGACTACT AGAGCCAGGA GACTTTTTCG ATAAAGAGAC      1020

AAAAAGTCCT TTTTCACAAT CCTATTGACA AAGACATAGA AACTTGGCAG TGTCACTAGA      1080

GCTACTAGCT GAACCAAATG AAAGAGATTC TTGACCACTG CGAAATGGTG CAGACCAGCT      1140

GCTGACGAAC GAAAATCAGG CATCTGTAAG ACCTGACTAA AAGGATTGGT CAGATAATTC      1200

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TTTAGCCACT GAATCTCCAT AGGATAGAAA ATCCAAGCCA GATAAATGGT CAGAAGGATG      1320

GAGAGGGAGA GGAGAAAGAG CATAGAGCCC CAAAAGATCA ATTTAGTTTT CATCAAAATC      1380

CCACTCCGCA AGGCTAGAAA CCACATGTGT CGGTGCGATT GGCAGGCCAG CTACTTCTTC      1440

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AATATCAGTC AAATAATTGT CCCCAACCAT GATTAACTCT TCACGTTCCA AACCTAAGTG      1560

CTCAACCGCC TTGTCCATAA TGATGGCATT TGGTTTTCCG ATATAAACCG GCTTCACTCG      1620

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CGGGATGTTG AGGTCAGGAT TGGTTCCGAT AAAATGGGCA CCCTTTTGAA TAGCAAGAGT      1740
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898

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TGCTGTGGCA AATTTTTCAT AGTCGACTTG CCAATCCAGA CCAACTACCA CGTAGGCAGG      1800

TTTTTCCTTG TCTTCCACAT AACCAGCCGC CTTGATGGCT TCCTTGAGTC CTGCTTCTCC      1860

GACGACATAG ACGGTCTTTT CAAGCCCCAA ATCATTCATA TAGTCGATGG TTGCCAAAGT      1920

CGCTGTGTAG ACAGTCGATA GGGGCGTATC GATATTAAAA TTCTGAGCCA ACATCTCCTT      1980

AACACTCTCT GGAGTGCGGG TTGTATTGTT GGTTACAAAG AGATAGGGAA TGTCCCGCTT      2040

TTGCAATTCA TGAACAAAAG TCTCTCCAGC AGGGATTCGG TCTTTCCCCT TATAAATGGT      2100

TCCGTCTAAA TCAATTAAAT AGCCTTTATA TTTCATCTAT TTCTCCCTAA GCCTTTTTTA      2160

TTTCTTGCCA AGTAATGATT GCTTGGGCAT TGATAACCCC ATCACTTGTA ATTTCATGCT      2220

TGCTTTCCAG TCCAGTCCGT TCAACAGCCG ATGTAATCAC CCCACCTGGT CGAACTTCCT      2280

TGACATACTT GAGGTTGATT TTCTTGGGAA TATAGTGGGT CAAAAAATCC GCTCCCATGA      2340

CCTCAAAAAT CCAGTCCAAG TATTTACTGT TATTGACATG ACCATTCATA TCCAAGTCGT      2400

AAAAACGAAC ATGGTAATCC TTGCTGATCG GTTCTTCCAA GGACTCATAC TTCGGTCCAC      2460

GGATAAGTTT TTTATCAAAA TCAGACTGGT AAGGAGCCAC AATCTCAGGT TCAACAACAT      2520

GGACTTTTCG ACTGTCGCGG TCCATGAGAA CAAAGGTCGC CATCATGTGG ATGAGCTCCT      2580

GCTCCGCTTC ATTATAAATA GTAAAGCGAC GGTAGCAAAA AAGTCGATTG TAGCTCAAGG      2640

CTTCCGTTTC GATGGTAATT TCTTCCGCAA AACGAGGCAA ACGAACCACC TCAATATCAT      2700

ATTCTACGAT AATCCAGACC AGATTATATT CTTCCAAAAT GGCCTTATCA CTAACTCCCA      2760

GTTCAATCGA CTGCATCCCT GAAACTTGCA GTGACAGCAA AATCACATCT GGAAGTTTGA      2820

TATGACCGTT CATATCAGCC ATATCAAAAG GAATTTTCAT TTTCATTTGA TAAGTTAAGC      2880

CCATGATCCT ACTCCAAAAT AAATCGTTCT GCTACAGTAT CTCCCAAAAA GAGACCTCTC      2940

TTTGTCATGC GAACGTGGTC ACCCTCAATC TGCATGAGGC CTTGTTGAAC CAAATCTCTG      3000

ACAATTTCTC CATAAAGTCC AGCAAAAGAC TGTCCAAATT TTTCCTCAAA TCGCGCCATG      3060

GAAACCCCGG ATTTCTTGCG GAGTCCCAAG AACATTTCTT CTTCCATTTG CTCCTTTTGA      3120

CTCAGGTGAT CTTCTGTAAT ACAAGCATTG CCTTCCTCAA CCGCACTGAG ATAATGACGA      3180

ATGGGACCAT GATTTTTATA GCGTACTCCA TTGACATAAC CAGATGCCCC TGCACCAATA      3240

CCATAGTATT CAGCATTGTC CCAGTACATG AGATTATGAC GACTTTCAAA ACCGGGTTTG      3300

GAGAAATTAG AAATCTCATA ATGCTCAAAA CCCGCTCGCT CCAGCTCTGC AATGATGTAC      3360

TCAAACATCT CCGCTTCTAG TTCCTCCTTA GGCAGAGGCA ATTTCCCACG TCGCATCCGG      3420

TTCATAAAGA CCGTATGGTT TTCTAAAATC AAACTATACA AACTCATGTG GGGAATATCC      3480

AATCCAATGG CTTTAGCCAC ATTTTCCTTT ACTTGCTCCA TGGTCTGACC AGGCAGAGCA      3540
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899

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TAAATCAAAT CAATGGAGAT ATTGTCAAAA CCAGCCAGTT TCAGGCGATC GATATTTTCA      3600

TAAATATCCT TCTCCAAATG ACTGCGCCCA ATCTTTTTCA ACATCTTATC ATCAAAGGTC      3660

TGGACACCTA GCGAAACACG ATTGACAGCC GAATTTTTCA AAACAGCTAT CTTATCCGCA      3720

TCCAAATCGC CTGGATTGGC TTCAATGGTC AACTCTTCCA AGACAGACAA ATCCAAGTTT      3780

TTAGTCAAGC CATTCAGTAA CACCTCCAGT TGCGGAGCCG ACAGGGCTGT CGgTGTTCCA      3840

CCACCGATAT AAAGGGTTGA CAACTTTTCA ATATCATAAG AACGAAACTC TTCCAGCAGA      3900

TGCTCTAAAT AGCTGTCGAC TGGCTGATTT TTGATGAAGA CCTTTGAAAA ATCACAATAA·    3960

TAACAAATCT GGGTACAAAA TGGGATGTGC ACATAGGCTG ACGTTGGTTT TTTCTGCATA      4020

GTAATTATTA TACCACAAAG ACTAGATTCC AGATAAAAAT CACCATCCCC AGATACATAG      4080

TCCGTCCGGA GATGGTGATG GTTTATTCTT CTGTTATATC AATCACAATC TCTTCTGAGT      4140

CATCAAGAGC TTCGGCTTTT TCTTGCCATT GCTCCTTGAG ATTATTTAAT TGATTTTTTG      4200

ATGCTTCTGT CGCTTGAAAA GCATAGGATT TAGTTTGAGC AAGTATACTG TCCACAGTGA      4260

TTTCACCTGA CTCAACCTGT TCTTTTGTTT TCAGAACAAA ATCTGTAGCC TGCTCCTTAA      4320

CTTCTGTCAG TTTTTCACAG ACTTGCTCCT TGGCATACTC CGGATCTTCT CTCAAATCAT      4380

CTAGAAAATC TTGAGCCTGA CTGCAAACTT GTTTGCCCTT ATCACTTGTT AAAAACAAGG      4440

CAAGAGCTGC ACCTGAAACG GTTCCTAAAA GGATTGAGGA TAATTTACCC ATAAGGATTC      4500

TCCTTTTTTA TTTTTTGAAA AATTTACTTG CAAGACGAAG AGCTGACAGA CTTGCACCAG      4560

TCTTGAGTGT TTTTGAACCA GCTGATGAAG CTTTCTTGCT CAAGACACGC GCATGGTCAT      4620

TGAGGTCTGA AACAGATAGA GATAAATCTG CAACAGCACT GAAGAGTGGA TCAATCGTAG      4680

CCACCTTGAC ATTGATATCA TCTGCCAAGA CATTGACCTT AGCCAACAAC TCATTGGTGT      4740

GATGCAAGGT CACATCCACA TCTGAAGTCA AGGTTTTAAT CGTCTTTTCT GTTTCATCGA      4800

TGACACGACC AAGCTTTTGT ACAGTAATGA TCAGATAGAC CAAAAAGACA ATCAAAGCTA      4860

GGGCAACAAG AATATATGCA ACTTCTAACA TTTAGTTTTC CTCCTCTGTA ATATAGTAAG      4920

GGGCCTTCTT TCGATTTTGA TAAATAACGA TCATTATACC GAGACCGATA AGGACAACTG      4980

ACAGCCATTG GGACACTCGA AAGCCGAAGA ACATGAGACT ATCTGTTCGC ATACCTTCGA      5040

TAACCATACG ACCGAAACCA TACCAAATCA AGTAAAAGGC CGTGATATGA CCTCGTCTGA      5100

GACTCTTCCA TTTCCGTCTA AAAATCAGAA TCAAGGCAAA GCCAAGCAGA TTCCATAGAG      5160

ACTCATAAAG GAAAGTCGGT TGACGGTAGC TCCCCTCAAT ATACATCTGG TCACGGATAA      5220

AGCCAGGTAG ATAATCCAGA TTATCCACTG TTGCACCATA AGCTTCTTGG TTAAAGAAAT      5280
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900
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TACCCCAACG CCCCAAACTT TGAGCAATCA TAACGCTAGG CGCCGCAATA TCTAGAAAAT          5340

CCCAAGTATT GATGAGTTTA CGGTCAGCAA AGATATAGAG CACAAGAGCC CCAGTTATCA          5400

AACCACCGTA AATGGCCAAA CCACCATTCC AAATGGCAAA AATCTCTCCT AAATTCTGAC          5460

TATAGTAATC AAATCGGAAA ATAACATAGT AGAGACGAGC TCCTAAAATA GCCAAGGGAA          5520

AGGCTACTAA GATAAAATCT AAAATATCGT CTGGTATGAT CTTCTTTCTA GGTGCTTCTT          5580

TCATGGTCAA ATAAACCGCA AGAATCAAGC CTGTCACAAT ACATAAGGCA TACCAACGAA          5640

TGGCTAGGGG TCCTAGTTGA ATAGCAATTG GATCAAGCAT TTTGCACCTC ATTTCGAGCG          5700

ATTAGACTTG TCAGTCGTTC GTCGAACAAA CGGGTCGCAT CAAAGCCCAT TTCCTTGGCA          5760

CGATAATTCA TGGCAGCTGC CTCAATCACA ACAGAGATAT TACGACCTGT TTTAACTGGA          5820

ATACGAATAC GAGGAATGtA CGCCAGAAAC TTCAAGTTCC TCTGCATTAT TTCCAAGACG          5880

ATCAAAGGTC TTATGCGTAT CGTAATTTTC CAAATAGACA GCAAGCTGAA CCTGTGAAGA          5940

ATCCTTGACA GCACTCGCAC CGTAGAGACT CATAACATCG ATAATACCAA CCCCACGAAT          6000

TTCAATCAAG TGTTTCAAAA TTTCAGCTGG TTCACCCCAG AGAGTAATCT CATCCTTGGC          6060

AAAGATATCG ACACGGTCAT CGGCTACCAA ACGGTGACCA CGTTTGACAA GCTCAAGACC          6120

TGTCTCGCTC TTACCAATTC CACTATCTCC CTGAATCAAG ACGCCCATCC CATAAATATC          6180

CATCAA                                                                    6186
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(2) INFORMATION FOR SEQ ID NO: 132:

     (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 9541 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 132:

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GAAAATCACA ACCCTTTTTG CAAAATTTTT GAGATTATTT TCACAAACTT GATTTTTCAA            60

AGTATACTCA ATAAAAATTA AAAAAATCCA CTACGTCAAG GCGAGGCTAA TGTGGTTTGA           120

AGAAATTTTC GAAGAGCGTG AATGAGTATC ATCTATAGTA AAATAAAAAA ACTGAACAAT           180

TTGGTTGGGG ACAGCCAAAC CAATTTCTCA CAATGTTTCA GAAACAAGGG TGTGCTATTC           240

CAATTTCAGC CTACTATAAC TGTCATAGAT TGCTGAAACA AAGTCTAGGT AAAAGTCTTC           300

ATAATAAAAA GACCTCCTAT CAAGTGTTCA AAAACTTTGA TAGGAGGTCT TGTTTTGTGA           360

AAATATTTAT CAAATTTTCT ATACAAGTGA GCTGTTAGCC AGGTTCTTTC TATTCTTTCA           420

ATTTCAATGA ATGGATTTTT TACTAATACT CATAACTGGG AATTTGTCTG TGTAAAAATA           480
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901

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GCGAGATAGA TGGTATTTAT AAAACACTCA AGACAGCTAG ACTAATATCA TTTAAAACAT      540

TATCTTCTTT TGAGCGACTG TTGGTTACCA ACATAGCTAA ATTTCCTGCA TTTTCAAATT      600

GATAGGGTTC TGATTTAGCA TTCACAACCA CCAAGAGGTG TTCTTTGCCG TGAACTTCAT      660

AGATAAGGTA GCCGCTATGT TCAATCGCAG AATGCACAAA GACATGATGG TAAATTTCAT      720

CATAGCTAGA GTAAGAAAAG GCACCAGTTT TTGTCTTCAA TCGGATGACT TGACGGATAA      780

ACTCAATACT GTCTTGACGC TCATTAATCA AGTTCCAGTT CACTTGGTTC ACACTGTCAG      840

GAGCATTATA GCTATTCATC GCACGCTCTC TATCATCATG GGTCAACTCA CCATTTTCAC      900

CAGTCGCAAC CAGTTTGGTA CGACCAAATT CTTGACCGAT TTCCATAAAG GCCATCCCCT      960

GCATGAGCAG ATTCATGGCT GTGGCAGTTT CGACCTTGCG CATGATTTGC TCTGAACTTT     1020

GGTCTGGATG AAGGGTTGCC AATAAATCGT GAAGATTGTA ATTGTCATGG GCTTCTACAT     1080

AGTTAAGCAC CTGATTTGGA TGTGTATAGC TTCCTAATTC ACGACTTCCT AGGATTGCTT     1140

TAGCTAGAAT TGGCTCTGTC GCAGCACCAC TGACAAAACC TGACTTGATA GCACCATAAA     1200

CTTCTCCCCC TTTGACAGCA TCGCGCTGAT TGTCATTAAA GAAACCAATA TTTGGCATCT     1260

GGTAGGCATT GTCCTTCTTG GCCTTATCAT AAGGGGCAAG ACCTGTTCCC ATATCCCATC     1320

CTTCTCCATA GAGGATAATG TTGGAGTCGA TTTCATCCAA GCTTTGACGA ATCATCTGCA     1380

TGGTCTTGAC ATCATGAATC CCCATCAAGT CAAAACGGTA GCCGTCAATA TTATATTCCT     1440

GCACCCAGTA TAGAAGAGAA TCAATCATAT ACTTGCGAAA CATTTCGTGT TCACTGGCTG     1500

TTTCATTTCC AACACCCGTT CCATTCTGGA AGGTACCATC TGGATTCATA CGATAATAGT     1560

AATCAGGGAC TGTTGTTTGG AATGGTGCAT CAACAACTGA GAAGGTATGG TTATAGACTA     1620

CATCCATAAT GACTCCAATA CCCGCATCGT GATAAGCTTG AACCATCACC TTCAAATCAC     1680

GAATGACCTG AGCTGGATCA TCTGGATTAG TTGAAAAACT AGTTTCTGGC GCGTTATAGT     1740

TTTGTGGATC ATAACCCCAG TTGTAGGTTA CATTTCCATC CTCATCGTAT TCTTTATGAC     1800

GGTCTGCAAT TGGTTGCAAT TGAACATAAT TGTAGCCCAG CTTCTTGATG TAATCAAAAG     1860

CAGTTGACTG GCCGTATTGG TTAACTGTTC CAGCCTGAGC AGCACCCAAG AAAGTTCCTC     1920

GAAGATGTTC ATCTACACCC GATGTAGGTG ATTTAGTCAA ATCACGAATG TGCATTTCAC     1980

AGATAACTGC CTTACATGGA TTTTCCAAGC GCCAAGTAGC CTCCGAACCG TGCTTAACCT     2040

CGAAGTTTTC AACTTGCTTT TCTACATGGC TCAGAATAGC TGAACGTTTG CCATCAGGGC     2100

TGGTCGCGAT TGTATAAGGA TCACGTGTCA GTGTTTGGTG ATGAGGGAAT TGGACTTGAT     2160

ACTGATAAGT CTTACCTACC AAATCTTCTT CAACATCCAA ACTCCAGACA CCGATTGTAT     2220
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902

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TGTCCTTATG ATTATAAGAG TAGCTATTGC CTCTTTTCAT CTCAAAAGTC TTCCAAACGG    2280

GTGCATCATT AGCAGCTGAT TCATAAACGA CAACTTGCAC TTCTGTCGCT GTAGGTGACC    2340

AGAGAGAAAA ATGAGCCTGA TTGTCCTCTA CACGGCAACC CAATTCTCCT TGGTAACCCC    2400

AATGATGATC AAAACTAGCA CTGTTAATGG CCTTATCAAA GGCAAAAGGA TTTTGATTTT    2460

TATAGAAAGG ACTGGCAATA GCAGGATTTT CAGAGTAATA AATCCTATCA TCGCCTTCCA    2520

AAATCCAGAC CTCTGTTAAT AGGGGATAGT GATTAAAACG GATAGAATAT TCTTTACTAG    2580

TTTGACCTGT ATGAACCACA AAATTCAAGC TTTCTATAAC ATGTGAACTT GGGTGTTCAA    2640

AGCTAAATAA AGCTCCAAAA TAATCTTCTT TGTAGGTTAG CAAATCAATT CGTTGATCCT    2700

GACTTTTTAC AAAGGAGCAA GTGTCATATT CTCCATTCTT ACGATGGTAA TGAATGCGCA    2760

TAGGGTAGTT ATACATTTTT TATTTTTCCT TTTTACTTTG TTTCTATTTC ACTAATAAAT    2820

TTTTGTCAAT CTCGTCTCAA TTAACAGACA TAGTCATATT CTCTAAACTC TGTTTTTAAA    2880

CGATCCATTA CAAACTTTCT AGCCATGCCT CATCTCTGAC CTGGATACCA AGTTCTTGTG    2940

CTTTTTGCAG TTTACTTCCA GCGTCTGCAC CTACCACGAC GAGGTCGGTC TTTTTAGAAA    3000

TACTACCTGT CACTTTGGCA CCCAGACTTT CGAGTTTACT TTTAGCTTCT GAGCGCTTGA    3060

GTCGTTCCAA TTTTCCTGTC AATACCACGG TCAAACCTGA CAAGGCCGCA TCCGCTACTA    3120

CCGTCTGTCC TTTATAGTCC AGATTGACCC CAGTTTCTTT CAATTCTCTG AGCAGAATTT    3180

CAGAGCCTTC TGTCGCAAAA TAAGTCTGAA GACTTTTGGC AATCACGCCA CCTAGACTTT    3240

CAATACTAGC CACTTCCTCT GAATCTGCCT GAGACAGATT TTCAATTGAA TGGAAATATT    3300

GAAGTAAAAG CTGACTAACC TTGCTTCCGA CATGACGAAT TCCCAAACCA AATAAGAGCT    3360

TCTCGGCAGA ATTTTCCTTT GATGCTTGGA TAGCCTGATA CAGTTTAGCA GCGGACTTTT    3420

CCTTAACTCC CTCTAAAAGG AGGAAATCCT CTTCTTGCAA ACGATAAATA TCCGCCACAT    3480

CCTTGACTAA ATTAGCAGCA AAAAGCTTCT CAACAATAGA TGGACCAAGG CCTGTAATAT    3540

TCATAGCATC ACGAGAAGCA AAGTGAATCA AGCCTTCCAT GATTTGAGCA GGGCAACGCG    3600

GATTGATACA ACGTAGGGCC ACTTCATCTT CAAAGTGCAA CAAGTCAGAG TTACAACTTG    3660

GACAGTTTGT AGGGATATCT AGTTTTTCTT CAGAAACCCG TTTGGACTCT ACCACACGTA    3720

AAACGGCAGG GATGATGTCA CCAGCCTTAT ATACAATGAC CGTATCGTCT TTTCGGATAT    3780

CTTTTTCAGC AATATAATCT ACATTGTGCA GGGTCGCACG GCTAACAGTC GTACCGGCAA    3840

GTTGTACTGG TGTTAGATTA GCAGTTGGAG TTACAACACC GGTACGGCCA ACTGTCCAGT    3900

CAACTGATAA GAGTTGAGCT TCTTTTTCTT CGGCAGGGAA CTTGTAGGCT ACTGCCCACT    3960

TTGGAGCCTT AACTGTAAAA CCAAGTTCTT CTTGACTTGC TAGGTCGTTG ACCTTGATTA    4020
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903

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CCACTCCATC AATATCGTAA GGCAGATTTT CCCGTTCCTG TCCTACTTCT TGGATAAAAT        4080

TCCAGATTTC ATCTATGTTT TCAGCCAAGA TTCGCTTAGG ATTGACCACA AAACCTAGTT        4140

GTTCTAGGTA CTTCAAACCC TTTTCTTGGC TATCACGAGT TGAAGGGCTG GCTTCTTGAT        4200

AGAGAAACGT TGCAAGATTA CGCTTGGCAA CTACTGCTGT ATCCAACTGA CGCAGAGTTC        4260

CTGCTGCCGC ATTACGAGGA TTAGCAAATT CAGGCTCTCC ATTTTCTTGG CGCGCTTGGT        4320

TAACTTGGTC AAAGGAAGCG CGTGGCATGT AACATTCCCC ACGAACTGTG ATATCTAGTT        4380

CTTCTGGCAA AGTCAAAGGG ATGTCCTTAA CACGCTTGAG GTTTTCTGTG ATATTTTCAC        4440

CAATTGAACC ATCTCCACGT GTTACCCCAG CAACCAAAAT CCCCTTTTCA TAAGTCAGCG        4500

AGATAGATAA GCCATCGATT TTCAGCTCAC AAATATAGGT CGGATGAGCC ACTTCCTTAC        4560

GAACACGCGC ATCAAAAGCA TCTAGCTCCT CACATGAAAA AGCATCCTGC AAACTATAAA        4620

GAGGATACTG ATGACTGTAT TTTTCAAAAC CATCTAAAAC CTTGCCACCA ACACGATGAG        4680

TCGGACTGTC TGCTAGCACT TGCTCTGGAT AAGCAGTTTC TAACTCGACC AACTCACGGT        4740

AAAGGCGGTC ATACTCACTG TCTGAAACCG AGGGATTATC GCTGGTATAG TACTCAGTCG        4800

CATAGCGATT GAGCAAAGCG ACTAACTCAT TCATTCTTTT ATTCATAAGA CCATTTTACC        4860

ATAAAACAAG CCCTCCTCAC AAACGAGAAG GGCGGAAAAA ACACTTAGTT TGAAATTATT        4920

TTTGAAACTC AAGCAACCTT ATATCAATTT TTCAAAATGA GTTCGAACAT ATCCGAGAGC        4980

TAAGAAATAT AAGGCTACAA CTCCAAGTCC AATAATCAAG AAAGAATAAA GATGGACACT        5040

TGGCAAGACT GTCATAAATC CTTTTGCAAT AGGCATAAAT AGAATAGCTA AGGTAAAAAT        5100

TGTACTCAGT ACTCTTCCAA GAAATTCGCT CTCAACCTTG GTTTGTACTT GAGTAAAAAA        5160

GTGAATATTA AAAATCGTCA TAAACAATTC ACAAACTAAA TTTCCAGAAA AGGAAAGAAA        5220

AGTTGGAAGT GGTAATCCCA TCATAAAAAC TCCGACACCT GTCAAAGCCA GTAAAATCAA        5280

AAGATTATAA ATATTAGCTT TAATTTTACT AGCTAGAAGA GCCCCAATGA TGGAACCAAT        5340

AGCCCCCATA GTTAAAATAC TTGCATAGGC TCCTTCTGAC CCGTAAAGCT GATTCGAAAA        5400

GGGAAGTAGA AATTCAAAAG CTGCAAAAAA GAAATTAACG CTGGAAGCTA CCAGCAAAAG        5460

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ATCTCTCCCA GTAAAGCCT TTTTCTCTTG AACTTTTGCT TCCTCTTTTG GAAGGAAAGC        5580

CACTAGAACA AAAGCAATGA AAAAAGTCAG CGAGTCTAGC AGTAGCGTCA TATGGAGACT        5640

TGCAAACTGT AAAACAAGGA AGGAAAGAAC AGGAGAGCTA ACACCTACAA CCTGCAAAAC        5700

CAGCTCTAAG CGAGAATTAT AGATCACAAT CTCATCTTTC TCCACCACTT CAGTTATGAT        5760
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904

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AGCTTTATTG GCTGTGCGAG AAAAGGCAAA AGCAATAGCC TGCACAATGT TAGCAACAAT      5820

CAAAGCGCCA ATCATCCAGC TATCATTCCT TATGAAAGAA ATAGCCAGAC AAAGAATCCC      5880

ACAAACAAGA TCTGCCGTCA TTAAAATCTT ACGACGAGAA AAACGGTCTG AAATAACTCC      5940

GCCAAAGGGA TTGACGAGAA TAGATGTGAC GAGCTCAGAA ATCTGATACA TTCCTAAAAC      6000

TGTCTGTCCT ATAGTCCCCA TAGAAGCCAA CCAGACACTA TTTCCATAAT CATAGAGCAT      6060

ATTTCCCATT TTATTGATAG CCCCACGGCT AATCAACTGC ACTGCATAGC GATTCATATT      6120

AAAGCTCCTC TCAAATTTTG AAACTATTGT ATCAAAACCG AAAGGAGCTT TTTATTTTTT      6180

CCCTTATTTG GGAAAATTAA CTTTTGACAA ATTTTTCGTA GTGTTCCTGA TAATAGGCTA      6240

CTTGCTCTGG AAGACCTAAC ACATCAAAAA TATGCATGGC CTCTTGCATC TGCTTACAGC      6300

CTTCTTTACA CTGTCCTTTT TGATATAAGG CAAAACCTTT TAAATAATGG AAAACATTAC      6360

GCTCATAAAG CTTAATACCT TTGTCAATAA TCTTCTCTGT ATAAGCCTCA AAATAGTTGG      6420

CATTATAAAA AGAAGAATGC TCTAAACAAT GCTGGTAACA ATTGAGGGCC AAAATCAACA      6480

CTAATCTCTT ATGGCGACTA ATCTCTTGGT AAAATTCCTC CCTCTCCATA ACTTCTCTAC      6540

CAATCCGAGT GACATAGTCT ACATCGTAGA AACTATAGAG GTTACCGAAA AGAATCAACT      6600

CATACATGGT CCATTCTTCT GTTTTGAAGA GATAATCTGC TACCTTACCC AAATCATCCT      6660

GCTTCATATC ATAACTCGCA TCTCTTTGAC AAATCAGACC TTGTAGCAAA ATCCAGTTCA      6720

GCTCAAAATA AAGGGGAGTC GTCGAACTCT TAGACTTTTC AAGTTGTTCT CTTTGAAGCT      6780

TTTGAAAACC TGCAATATCG TTTGAATAGT AAAGTGGGAT AATCTGTGCC ATCATAGACA      6840

CATGTTCATG ATTATGAAAA TTCCTTGCCT TATCCATGAA ATTTTCGATT GTTACATGAA      6900

TGTTATCCAA AATCTCAAAG AAACGGGAGA CTGCCAGGTC AGACTCCCCA AGCTCAAAGC      6960

GAGATAACTG AGAGGTAGAG CAGGATTCGC CTGCTGCTTC CTTTAAAGAA TAATTTCCAC      7020

TTGTTCGAAA TTCACGAAAT ACTTTTCCAA GATGTTCCAT CTTTACACCT GCTCTGATAA      7080

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TAATTCCATG AGTTTGTCGG CATCGTTTGT TTCCAACATT TGTTCAGAAA TGGCTTGGCT      7200

TTGACTTTCT AGCTCTTCAA TTTCAGCTTC TAGACTTTCG ATTTGTCGCA TGAGTTTGCG      7260

AACTTCTTTT TGACTTTCTT TCTGGGCCTG ATAGTCATTG ACTGGACTTG CTTCCTTTGC      7320

TTGATTGCTA GTTGAAGCTT CCTCAGTCTG ACTCATTTCT GCTGTTGCTT TCTTCTCAAC      7380

ATAGTAGTCG TAATCTCCAA GGTAGAGAGT TGAACCATTC TCAGACAATT CCAAAACATG      7440

AGTTGCCACA CGATTGATAA AGTAACGATC ATGACTGACA AACAGCAAGG TTCCATCAAA      7500

GTCAATCAAG GCATTTTCTA GCACTTCCTT ACTATCAATA TCCAAGTGGT TGGTCGGCTC      7560
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905

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ATCCAGAATC AAAAAGTTAT TGTTTTCCAT AGACAATTTA GCTAAAAGCA AACGAGCTTT    7620

TTCGCCACCA GATAGCATGC CGACTGATTT TTTAACATCA TCTCCTGAGA AAAGGAAGGC    7680

TCCAAGACGG TTGCGGATTT CAACTTCTGG TGTCAGTTTG AAATCATTCC AGAGTTCATC    7740

CAGCACCGTA TTACTTGGTG TCAGCTTGCT TTGGGTTTGG TCATAGTAAC CAACCTCAAC    7800

ATTAGCGCCA AAGCGCTTTT CTCCCTTGAT AAAAGGAATC TGGTCCACAA TAGACTTGAT    7860

AAAGGTTGAC TTGCCGATAC CATTTGGACC AACGATAGCG ACAGCATTCA TCTTACGAAG    7920

ATCTAGGTTA ATCGGTTGTG ACAAGACTTC CCCGTCATAG CCAACAGCTG CATTTTCAAC    7980

AGTCAAAACA ACATTGCCCG ACGTTTTTTC AGACTGGAAG GTCATGTTGG CTGATTTCTT    8040

GCCAGCTTCA GGCTTGTCCA AACGTTCCAT TTTTTCCAGT TGTTTACGGC GAGATTGAGC    8100

ACGTTTAGTC GTTGAAGCAC GAACTAGATT GCGATTGACA AAGTCTTCCA GAGCAGCGAT    8160

TTCCTTCTGT TGCTTTTCAT AGTTTTTTGC CTCAGTAACT AGCTTTTGCT CCTTCAATTC    8220

GACAAAACGA GAGTAATTCC CCACATAGCG ATCCAAGGAA TGCTTGGTCA AATCTAGCGT    8280

AATTGTCGCA ACCTTGTCCA AGAAATAACG GTCGTGGCTG ACGATAATGA GGGCACCGCT    8340

ATAGTTTACC AAGTAATTCT CTAGCCAGGC GATGGTTTCA ATATCCAAGT GGTTAGTTGG    8400

CTCGTCCAAG ACCAAGAGAT TGGGCTTTTC AAGGAGCATT TTGGCAAGTG CCAAACGAGT    8460

ATTTTGACCA CCAGAAAGCT CAGCAATTTT CATCTGCCAC ATACACTCCT CAAACTTGAA    8520

TCCATTCAAA ATCGCTCGAA TATCAGCTTC ATAGGTAAAG CCACCTGCTT GGCGAAAATT    8580

CTCAGATAAG CGGTCATAAT CTGACATCAG TTTATCCAAA TCCTCACCAG ACTTTTCACC    8640

CATCTCCAGC TCCATCTGAC GCAGTTGTCT CTCCGTCCGA CGCAAATCAT TAAAGACATG    8700

AAGCATTTCA TCGTAGATGG TATTTTCAGA CTCAAAACGG CTATCTTGGG CTAGGTAAGA    8760

CAGAGAAATA TCTTTTTTCT TATTGATTTC TCCGCTAGTT GGCTCCTCTT CTCCAACTAA    8820

AATCTTCAAA AGAGTAGACT TACCTGCACC ATTTTTCCCA ACAAGAGCAA TCCGATCTCG    8880

TTCATCAACC TGCAGGTTGA TATTATCGAA AAGAACCTCT CCTGCAAAAG AACGTTCAAT    8940

TTTATTAGCT TGTAAAATAA TCATACAAGT AGTATAGCAT GTTTCCCTAA GGCATTCAAG    9000

ATAATCGTAA GTCTTTTAGT ACAACTTTTA TAACATAAAA TAAACTAAAT TATGTATATT    9060

TTATATTAGA TTACTTCACT ATCTTGTTGG ATTTTCTAAC CAGCTAATCT TGTTTCAAAT    9120

AGTTATCGCA CAAGTCTATT ATTTAATTCT TTTCATCATT TACGTACGTA TAGCAGATTG    9180

AAATAAGATG AGAACAAATC GATTGGGAAA GTAAAATTAA TTTCTATAAA TGTTTTAGCA    9240

ATTGTTTCGT ACTATTTTAG ATTCAGTCTA CTATATACAA TATTTTCGGA ACATTCAACT    9300
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906

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TTTTAACTCT ATTTATTACT AGATTTCATA ATTAAAAAAC CTACTGACCA AGCTAGAAAG    9360

CTTGATACAA TAGGCTTTTT AAAGACTGAT TATTTAACAG CGTCTTTAAG AGCTTTACCA    9420

GCTTTGAATG CTGGTACTTT AGAAGCTGCA ATTGTCATTT CTTTACCAGT TTGTGGGTTG    9480

CGACCTTTAC GTTCTGCGCG CTCACGAACT TCAAAGTTAC CAAAACCGAT CAATTGAACT    9540

T                                                                    9541
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(2) INFORMATION FOR SEQ ID NO: 133:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3502 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 133:

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GGTTATACTA TCATTGTAAG GAGGAAATCA TGTACCATAT AAAAGAAGCT GCGCAGCTTT     180

CAGGTGTCTC TGTCAAGACC CTGCATCACT ATGACAAGAT AGGACTCTTG GTCCCCTTAA     240

AGTCGGAAAA CGGCTATCGA ACCTACAGTC AAGAGGATTT GGAACGCCTT CAGGTCATTC     300

TTTACTACAA ATATCTAGGC TTTTCTTTAG AGAAAATAGC AGAGCTGTTA AAGGAAGAAA     360

GGACAGATTT ATTGCCCCAT TTGACTAGGC AGTTGGACTA TCTAACTCGC GAAAGGCAAC     420

ATCTGGATAC CTTGATTTCC ACCTTGCAAA AAACTATTCA AGAACAAAAA GGAGAAAGAA     480

AAATGACCAT TGAGGAAAAA TTCACGGGAT TTAGCTATCA AGACAATCAA AAATACCACC     540

AAGAAGCGGT AGAGAAATAT GGTCAAGAAG TCATGGGACA AGCGCTCGAA CGCCAAAAAG     600

GTCACGAAGA CGAGGCTACG GCCGCCTTTA ACCAAGTCTT TCAAACTTTG GCACAAAATC     660

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GTTACGTCTA CAACCCAGAG TTTAAGGAAA ACATTGACAA GTTTGGTTCT GAAACAGCCC     840

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AATTTCCTAG CCTATTTTTT ACTTCAAATC ATAAAGCCAG TCGTCACCGT TTTTGTAGTA     960

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TGCAAGTTTT AGATGAGAAA GATTTTCAAA GTCCTCCCAC CAAACTTTCC CTTCGTCTGA    1080

AGACTGGAGT TCACCAGTAA AGTGTTCTGT CTTGTAAAAA AGGACGACAT AACGATAATC    1140
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907

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CTTGTCGTCA TACCAGTTTT TGATACCACA GAGTTGGGGT TTGGAAATGA TCAGACCAGT   1200

TTCTTCTTTC ACTTCACGAA TGACAGCATC GACAAAGGAT TCGCCACGTT CAACATGACC   1260

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TCCGTTTTTA ATCATACACA TGTTAACAAA TTCGACTGCC TCTCTTCTGT TCATTCTTCA   1380

CAACCTTTAA TCTTTAATCA TAATGCAGAC TTCCCGCCAC CCAGCCGGTA CAGAGGGCAG   1440

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908

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ACCTGATCAG CTACTTGAAT GGTTAAGGGG ACACTTACAA AGGTTGTGTT AATAGCTGGT     3420

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CTCCATCTTT GTCAGGAACG AT                                             3502
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(2) INFORMATION FOR SEQ ID NO: 134:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 12665 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 134:

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TTAGTCTTGC TTATTTTTTC TATGCTGATG TTGATGTTGG TGATTCACTT GTTGGGAGAT     240

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TATCGACGAA TAGCTGAAGA GGAAAAGCTA TTACATGAAG TTATAATCCC AAATGGAAGC     480

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GTTAAAGAAA AAATATAGAA GGAAATAAAC ATGTTTGCAT CAAAAAGCGA AAGAAAAGTA     600

CATTATTCAA TTCGTAAATT TAGTGTTGGA GTAGCTAGTG TAGTTGTTGC CAGTCTTGTT     660

ATGGGAAGTG TGGTTCATGC GACAGAGAAC GAGGGAGCTA CCCAAGTACC CACTTCTTCT     720

AATAGGGCAA ATGAAAGTCA GGCAGAACAA GGAGAACAAC CTAAAAAACT CGATTCAGAA     780
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909

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910

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911

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912

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913

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914

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CAGGCAATAT CCTGGCAACC TTCAGTACTG GACCAGCCAT CAAGGATACT GTATCAAACT       10320

TGATTAGCGA AATCCTTGGA ACTTTTGTTT TGGTGTTGAC AATCTTTGCT TTGGGTCTTT       10380

ACGACTTTCA GGCAGGTATC GGAACCTTTG CAGTGGGAAC TTTGATTGTC GGTATCGGTC       10440

TATCACTAGG TGGGACAACA GGTTATGCCT TGAACCCAGC TCGTGACCTT GGACCTCGTA       10500

TCATGCACAG CATCTTGCCA ATTCCAAACA AGGGAGACGG AGACTGGTCT TACGCTTGGA       10560

TTCCTGTTGT AGGCCCTGTT ATCGGAGCAG CCTTGGCAGT GCTTGTATTC TCACTTTTCT       10620

AGTTTATACT CTTCGAAAAT CAAATTCAAA CCACGTCAGC GTCGCCTTAC CGTACTCAAG       10680

TACAGCTTGC GGCTAGCTTC CTAGTTTGCT CTTTGATTTT CATTGAGTAT TAGAAAACAA       10740

TTATGTTGAT AGAGCTTGGG CAAGAGCCCA ATTTCAGCAA AAAATGAAGT AAATCTTCTC       10800

ATAATAAAAC GCATCATATC AAGCACGAAA ATTCCACGAG GTCAACTACA GTCAGAAAGC       10860

TGAACAACAA GCCAAAACGC CCAAAAAAGG CGGCAAAAAG CAAGCACCTG CAAGCAACGT       10920

GCCGAAATGG TCAAATCCTG ATTATGTCAA CGAATTAGAC CCAAAAATCG TTGATATGCT       10980

AGTAGAATTT CACAAGTCAC AAGGCACTTT GGAAACTCCC GAGGCGCAAG CAGAAATCGC       11040

CCAAAAACGT GAAGAAATCG AGCAAAGGAG AGCTGAGCTT GAGGGTAAAA AACAAGAGCT       11100

TTTGAACCGC TTGAACAAAT AGAGTTTCGC AAGTATTATG CTTACAAATT ACTTGAGCAA       11160

TTAACTAAAA TATAAACCCT GCCTTTATAT CTAGGCAGGG TTTATATTTT AGAAATTCAC       11220

GTAGGTTGTT ACGGTTTTTA CATACCCAGT ATAGTTTGAG TTTCTATAGT ATTCAGTGAT       11280

AAACTTCCAT TTTCTTTGAG CAACATGGAT ATAAGTACTT GTTATGTAGT ATGGATATGG       11340

GCTTTGTGAA TCCAAGTAAG ACTGATAAGC TTGTATACCA AAATATGCTC CACCAATTAT       11400
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915

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TGCACCCCAT GGACCCCCCA ATAAAGCACC TATCCTACCA ATCATATAAC TGATTCCAGC   11460

ACCAGTCATG AAGTTAGCGA ATGTGTTAGC TTGTTTATTC CCATGTATTG TGTTGACGTA   11520

ATTCCAAACA TTAGGATCGT ATGATCTAAA AGATATATTT AGGTCGATTT CATTCTTTTG   11580

ATAAGCCATA TAAAATGCCC CATTGATATA GACGCCGTCA GCACGTCGTT CAATAGTGTC   11640

TACACTTCCA TCTGGATTGA CAACCTCAAG AACTTCATCG CTTAAAATAT TTACTTGCGT   11700

ATCTCCGAAC CGCACTGATG AGCCATTCTC AAACTGAGCC TCACCAGATA CAACTTTAGA   11760

GTTTGCCGAT AAGCTATCAT CAGCAAAAAC AAACAAGCGA CGGGGAAATG CTAGACATAC   11820

AGAAAACAGA CATAACTAGC AAACACATGC ATTTAAACAT CTTAGACATA ACGGAAACTC   11880

CTTTGTATTT TTGATTTTTT TCAACTTTTA TTATACAATA AAACCAAATA AAAAGAAAGC   11940

GGTAACAATA TGCTTAATGC GAAAATTTTT TATATATTTT TATGTTTGAT CGTTATCGAA   12000

ACTACAGGCT TGTTGTTGTT GAAAAGAGGT CTCGAAATGG GTTATTTAGA CACAGAAGCT   12060

ATTATCCTCG CAGTTTTTTC ATTTGCTTTT TACAACCTAT GTTCATTCGC TTGGGTCTGC   12120

TCTACAATAA AAAACAATAA AAAATAAATA GACGTATTTT CAAAAAAAAC maAATGCATA   12180

TTTATATTAG CAAAACGACG ATTTAAATCG TCGTTTTTTT GTAGTACGAC GGGCATGTCG   12240

TATATCTGAG GTGTAAGTCC TCAGCCTGAC TATCGTGAGG TAGCAGGGAG AGGAAGGGAT   12300

AGCGAAATCG TGGCTCTACG AACAGGAACG TGATAGTAAG GCGTATATAC CCGATAAGGA   12360

GGCTTCAAAC TCTAAAGTCC AAAAAGGTAG TCGTAACCTA TATGTGTAAA TCACGAGAGT   12420

AATTGAATTC GGACTAAGGT TTGTGTGAAA AAGATAAATC TTTCTAGAGT CTAAAGACTC   12480

TGCGTCAGAT TTCCTATTTT CACTGTAACC TTTTAACGTC CTCATATCTT GTATAAACGA   12540

GGAAAGATGT ACGACTTATC CCGTGAGGTT TCATGAGCGT GAAAGCGTAG TAACAACGAA   12600

TCATGAGAAG TCAGCCGAGC CCATAGTAGT GAGGAAACTT CCGTAATGGA AGTGGAGCGA   12660

AGGGG                                                               12665
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(2) INFORMATION FOR SEQ ID NO: 135:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 5305 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 135:

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CGCTAATCAC TACAATCATT TTATTGTACT TTTTCACTCT CAAGAAAAGC AAGAAGTATT        60
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916

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CATTTTAGTT  TCATTTAGTA  TTATTTTGCA  TACCTAAAAT  ACAGTAAAAA  ATCAGTCATC       120

TTGGTATGCT  CCTGCTTTCA  CTATTCAACA  CGTTTTTGAC  TTATACTAGG  CTCATTTCCA       180

AAAGCATTAT  ATAATAGTGA  TATGAAACCA  ACTAAACTAA  ACAAGAAATA  TAAGCAATAA       240

AAATTCGTTT  AAAAGATCTT  ACTAAAGCTA  ATACTAAATA  AAAATAAAAG  AGTAAACTAG       300

GAAGTTTATT  TCAAACAACC  TAAAATACTG  ATTTTCGGCT  GAAGATAATA  CTGGAGTGCA       360

AATTAATGGG  GTTATAATAA  ATAGCTGATA  GCTTGTGTTG  GTTTTGGATT  TTTTAAGAGT       420

AGATGAGTAT  TAAAACTATA  AGGAGGACGA  AGGTGGCTAA  AAATTTAAAA  TTAAAATTAG       480

CTCGGGTAGA  GCGTGATTTA  ACACAAGGTC  AACTGGCAGA  GGCTGTCGGG  GTGACACGCC       540

AGACTATTGG  TTTAATAGAG  GCGGGAAAAT  ACAATCCCAG  TCTCTCGCTC  TGCCAGTCTA       600

TTTGCAGATG  TTTAGGGAAA  ACCCTAGACC  AACTATTTTG  GGAGGAAGAA  GATGAAAAAT       660

AGATTTTATT  ATTCTCAATT  ACTAGACGAA  AGAGAAGAAC  AACTGTTCAA  TAAAGCGGGC       720

TCTGAAAGTT  TCTATATCTG  CATTGCTTTG  TCGCTCCTAT  CTTATATCAT  TTCAGTATTA       780

GCACCAAGCC  TTTTTAATTC  TAATATGCTG  CTAATCGTTA  TCATCATAGG  GACATTTTAC       840

TTTTTCAATC  GTGCCCGTTA  TCTGGGAGTG  ACCTACTATG  GTCGTTTTCA  TTTTACGATT       900

TTGGGTTGTT  TTTTCCTAAC  CTTGGCTATT  ACGGCTCTTT  TGATGTTGCA  GAATTATCAA       960

TTCAACATAG  AAATTTATCA  GCACAATCCT  TTGAATTTTA  AATACCTGTC  TGCTTGGGTC      1020

ATTACTTATA  TCATTTACCT  TCCGTGGATC  TTTATTGGCA  ATCTTGGTCT  TAAGAGCTAT      1080

GGCGAATGGG  CTCAGAAAAA  ATTTGAACAA  GATATGGATG  AATTGGAGAG  TGGAGAATAG      1140

CTTGTTACTC  TTTTCTCAAT  CCAGCTAAAA  TGTGATATAA  TAGTACTAAT  TTATTGGAAT      1200

ACATGAAAGT  TCTTGAAAAT  TTTCATGGGT  TTCTAGCTAA  GGAAGTAGGA  AAAGTATGTA      1260

TCCAGATGAT  AGTTTGACAT  TGCACACGGA  CTTGTACCAG  ATCAACATGA  TGCAGGTTTA      1320

CTTTGACCAA  GGGATTCACA  ATAAGAAGGC  GGTCTTTGAG  GTGTATTTCC  GCCAACAGCC      1380

TTTTAAGAAC  GGCTATGCGG  TTTTTGCAGG  TTTAGAAAGA  ATTGTGAACT  ATCTTGAAGA      1440

CTTGCGTTTT  TCAGATAGTG  ATATAGCCTA  TTTGGAGTCG  CTTGGTTATC  ATGGGGCGTT      1500

CTTGGATTAC  CTTCGCAATT  TCAAGTTGGA  GTTGACCGTT  CGTTCTGCCC  AAGAAGGGGA      1560

TTTGGTTTTT  GCTAATGAAC  CGATTGTGCA  GGTGGAAGGA  CCTCTAGCCC  AATGTCAGTT      1620

GGTCGAAACG  GCTCTTTTGA  ACATCGTCAA  CTACCAGACT  TTGGTGGCGA  CGAAGGCAGC      1680

TCGTATTCGT  TCGGTTATCG  AAGATGAACC  CTTGATGGAG  TTTGGGACAC  GTCGGGCTCA      1740

AGAAATGGAT  GCGGCCATCT  GGGGAACACG  CGCAGCTGTG  ATTGGTGGCG  CCAATGGAAC      1800

CAGCAACGTG  CGTGCGGGTA  AGCTCTTTGA  CATTCCTGTT  TTGGGAACCC  ATGCCCATGC      1860
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917

CTTGGTACAG	GTTTATGGCA	ATGACTATGA	AGCTTTCAAG	GCTTACGCTG	CGACCCACAA	1920
AAATTGTGTC	TTTCTTGTGG	ATACCTATGA	CACCCTTCGC	ATCGGTGTAC	CAGCTGCCAT	1980
TCAGGTGGCG	CGTGAGCTGG	GTGATCAGAT	TAACTTTATG	GGTGTGCGGA	TTGACTCTGG	2040
GGATATTGCC	TACATTTCTA	AGAAAGTCCG	TCAGCAACTG	GATGAGGCTG	GATTTACAGA	2100
GGCTAAGATT	TATGCTTCTA	ATGATCTAGA	TGAAAATACC	ATCCTTAACC	TCAAGATGCA	2160
AAAGGCCAAG	ATTGATGTCT	GGGGTGTGGG	TACCAAGCTG	ATTACAGCCT	ATGACCAGCC	2220
GGCTCTTGGG	GCGGTTTACA	AGATTGTTGC	AATCGAAGAT	GAAACTGGTC	AGATGCGCAA	2280
TACGATTAAG	CTGTCTAATA	ATGCTGAAAA	AGTTTCTACG	CCAGGTAAGA	AGCAGGTGTG	2340
GCGCATTACC	AGTCGTGAAA	AAGGCAAGTC	AGAAGGCGAC	TATATCACTT	ATGATGGTGT	2400
GGATATTAGC	GACATGACAG	AAATCAAGAT	GTTCCATCCG	ACCTATACAT	ACATCAAGAA	2460
GACGGTTCGT	AATTTTGATG	CCGTTCCTCT	CTTGGTGGAT	ATCTTCAAAG	AAGGAATATT	2520
AGTTTACAAC	TTGCCTAGTT	TGACTGACAT	TCAGGATTAT	GCCCGTAAGG	AATTTGACAA	2580
GTTGTGGGAT	GAGTATAAGC	GTGTGCTCAA	TCCGCAGCAC	TATCCAGTGG	ATTTGGCGCG	2640
TGATGTATGG	CAAGATAAGA	TGGACTTGAT	TGATAAGATG	CGCAAGGAAG	CCCTTGGTGA	2700
AGGAGAAGAA	GAATGAGTTT	GCAAGAAACG	ATTATCCAAG	AGCTGGGTGT	CAAACCAGTG	2760
ATTGATGCCC	AGGAAGAAAT	CCGTCGTTCT	ATTGATTTCT	TAAAAAGATA	TCTGAAAAAA	2820
CATCCCTTCC	TAAAAACCTT	TGTACTAGGG	ATTTCTGGGG	GACAAGACTC	AACCTTGGCA	2880
GGACGTTTGG	CGCAATTAGC	TATGGAAGAA	CTGCGAGCTG	AAACGGGAGA	CGATAGCTAC	2940
AAATTTATCG	CTGTCCGCCT	GCCATACGGA	GTGCAAGCTG	ATGAAGCAGA	TGCTCAAAAA	3000
GCCCTAGCCT	TCATCCAGCC	AGATGTCAGC	TTGGTTGTGA	ATATCAAGGA	ATCAGCTGAT	3060
GCCATGACAG	CTGCAGTTGA	AGCGACAGGT	AGTCCTGTTT	CAGACTTCAA	CAAGGGGAAT	3120
ATCAAGGCAC	GTTGCCGTAT	GATTGCTCAG	TATGCCCTTG	CTGGTTCCCA	TAGCGGAGCG	3180
GTCATTGGAA	CAGACCACGC	CGCGGAAAAT	ATCACAGGTT	TCTTTACCAA	GTTTGGTGAC	3240
GGCGGTGCGG	ATATTCTCCC	TCTTTACCGC	CTCAATAAAC	GCCAAGGAAA	ACAGCTCTTG	3300
CAGAAACTTG	GCGCAGAGCC	AGCCCTTTAT	GAAAAAATCC	CAACGGCAGA	CCTAGAAGAA	3360
GATAAACCAG	GCCTAGCTGA	CGAAGTCGCA	CTTGGAGTCA	CCTACGCAGA	GATTGACGAC	3420
TACCTAGAAG	GCAAAACAAT	CAGCCCAGAA	GCTCAAGCGA	CCATTGAAAA	CTGGTGGCAC	3480
AAAGGCCAAC	ACAAACGCCA	CTTACCCATC	ACCGTATTTG	ATGACTTTTG	GGAGTAAAAA	3540
GGTCCGGGGG	ACCTTTTTAG	CTTCTTGCCC	TGAAATTAAA	AAGCAAGAAA	AACCTCCACT	3600

918

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GGAGGTTTTC AGCCTCTCAT CTTGAAATAA GAAAGTGAGA GAAGGTCTGG GGGATCTTGA      3660

ACCCCGAGTT TAGAAATAAG AAAATGAGGC AGATTCAGTA ACTCGAAGAG TTCGATTTCA      3720

TCGTCTTACC CCTGCAACGA TGACTAGGTT TGAAAAAGCT TGCTAGAGCG CATTTCAAAC      3780

CAGGCAGCAA CTGCGTCAAG AAATTAGAAG ACAAACTCGT TTTCTAGCTG TTACTGAGTT      3840

GAGCCTTTTT ACTACGAGTA TAGAAATAAG GAAGTGAGGT AGCATCATGA AATCTATCGG      3900

TACGCAAATA TTACAGACAG AACGTTTGAT TTTAAGAAGA TTTGTGGAGA GTGATGCAGA      3960

AGCCATGTTT CAAAATTGGG CTTCATCCGC TGAGAATCTG ACCTATGTTA CCTGGGATCC      4020

CCATCCTGAT GTCGAAATCA CTCGAAACTC GATTTGCAAT TGGGTTGCTT CCTATACTAA      4080

TCTCAACTAT TATAAATGGG CCATTTGTCT AAAAGAAAAC CCAGAGCAAG TAATAGGAGA      4140

TATCAGCATT GTTAAGATAG ACGAGGCTGA TTTAAGCTGT GAAATTGGCT ATGTGTTAGG      4200

CAAGGCTTAC TGGGGAAATG GTATGATGAC AGAGACTTTG AAAGCTATCT TGGACTTTTG      4260

TTTTACTCAA GCAGGTTTTC AAAAGGTCAG AGCACGTTAT GCCAGTCTCA ACCCAGCTTC      4320

AGGTCGTGTC ATGGAAAAGG CTGGAATGTC CTATCTACAA ACCATTGTTA ATGGTGTAGA      4380

GAGAAAAGGC TATCTTGCGG ATCTTATTTA TTATGGTATA AGTAGGGAAG AATGTTGAAT      4440

TCTATTTTCT GTTCTATCG AAGTCAACTA TTTATTGTAA ATATAATAAT TAGCATTCCA      4500

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TCTTTAATCT GGTTTAGTGT TAGTTAAAAA ATCGCTTTAA GCTTGTAACT AAGAGGGAGC      4620

TAATCGACTA GATTCTCCAG CCGAACAGGT GGTAATGTAC TTTTTATAGT GTAATCCTAG      4680

CTGTTGTTAA ATTTAAAATA GAATCCTCTA TCGAGTTAGG GAATTAAATT CAACCAATTT      4740

TATTCATGTT TTTTCTATCA AATTATCTAA TATTAAAATA GTCTCATTCT GATGAGAAAA      4800

CTATTCCCAA ATCATTCATA CCTCTCTCAA CTAGATGTAA CTTACAAAAC CCCTGACCTC      4860

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TTTCCTCGCT AGATTTCCTC AAAAGGGCAG ACTCCTCCCT TGGTGCGTCA CACGATTTTT      4980

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GAACAGGAAG ATTCAGGTTG ACTTTTCTAA TCCTAGAATA AAGTGCTGAA AACAATTCGG      5100

AATAGGCATA GAGACTAGAC AATTTGAGGA GCTGCTTGCG TCCTGTTCGA ACACATTTTC      5160

CCACCACGTG AAGAAAAAGA TGGCGGAAGC GTTTGATTGT TAAAGTTTGG AAGTCACCTC      5220

CAGCTAGATG TTTGAGAAAA AGATAGAGAT TGTAGGCGAT ACAGCTCATC ATCATACGAA      5280

CTTCGTTTTT GATTAAGGTT GAACT                                           5305
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(2) INFORMATION FOR SEQ ID NO: 136:

919

(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 3964 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 136:

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TGGCAGCTCG TCGTCGTAAA GGACGCAAAG TTTTGGCTGC ATAATCCAAA CGAATTCTAT      60

CAAAAATCAG TAGGAACTCG AGTCTACTGA TTTTTATTTT TGTAAAAAAG TTCAGTAGAT     120

GCAAATGGAT TCGGAAGCGA TGTTACAGTA GATTGAAACT AGAATAGTAC ACCTCTGTTT     180

CTAAAACATT GTTAGAAATC GATTTGACTG TCCTGATCGA TTTGTCCTGT TATTATTTTA     240

TTTTACTATA AAGTTGAAGT AGGTGGAGAT GGTACAGCAA CAATCGTCTT TAAAGATGGT     300

TCAGCTATTA CAATTCCAGG AAATCAATTG GTAGCACAAG ATCCAAAAGC ACAAGATAGC     360

ACTAAACTGA CTGCTGAAAA ATCAACTGTT AAAGCACCTG CTCAAAGAGT AGATGTAAAA     420

GATATAACTC ATTTAACAGA TGAAGAAAAA GTTAAGGTTG CTATTTTACA AGCAAATGGT     480

TCAGCATTAG ACGGAGCGAC AATCAATGTA GCTGGAGATG GTACAGCAAC AATCACATTC     540

CCAGATGGTT CAGTAGTGAC GATTCTAGGA AAAGATACAG TTCAACAATC TGCGAAAGGT     600

GAATCTGTAA CTCAAGAAGC TACACCAGAG TATAAGCTAG AAAATACACC ACCTGGAGAT     660

AAGGGAGGCA ATACTGGAAG CTCAGATGCT AATGCGAATG AAGGCGGTGG TAGCCAGGCG     720

GGTGGATCAG CTCACACAGG TTCACAAAAC TCAGCTCAAT CACAAGCTTC TAAGCAATTA     780

GCTACTGAAA AAGAATCAGC TAAAAATGCC ATTGAAAAAG CAGCCAAGGA CAAGCAGGAT     840

GAAATCAAAG GCGCACCGCT TTCTGATAAA GAAAAAGCAG AACTTTTAGC AAGAGTGGAA     900

GCAGAAAAAC AAGCAGCTCT CAAAGAGATT GAAAATGCGA AAACTATGGA AGATGTGAAG     960

GAAGCAGAAA CGATTGGAGT GCAAGCCATT GCCATGGTTA CAGTTCCTAA GAGACCAGTG    1020

GCTCCTAATG CTGCTCCTAA GACAACAAGT GCACCGCAAG CAACTGCAGG AACAATGCAA    1080

GATGTTACCT ACCAGTCACC TGCTGGCAAA CAATTACCTA ACACAGGTTC AGCATCAAGT    1140

GCAGCACTTG CTAGTCTTGG TCTAGTGGTG GCAACAAGTG GTTTTGCTTT GCTAGGAAGA    1200

AAGACTAGAC GTAGAAAATA GAACAGCTAG AAAATTCTAT TCTCTACTTA AAGTTAGATT    1260

ATAAGGGGGA TTTTGAGAAG TCATCAATCC TAGTGATGGG TGAGAAAAGT GAGAACCCAA    1320

GATAATCACA TACTTTAGCT GAATAGGAAT ATTCTATCAA TGTAGCCAAT CTCTTCTGTC    1380

TCTAACTGTG GAATAGGAGA TGGGCAATAT CGGATAGAAA AGATAGCAGA ATAGCTCTCT    1440
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                                 920
ATTGAAGAGA GGAGGGGAAA CCGAAAAATT AGGTGCCCCT CCTCTTTTTT GGTATAATAG      1500

AAGATAGAAA ACGAGGTTAG AAAGAGATGAT TTTTGATACA CATACACACT TGAATGTAGA      1560

AGAATTTGCA GGTCGTGAGG CAGAAGAAAT TGCCTTGGCT GCTGAGATGG GTGTGACACA      1620

GATGAATATT GTTGGTTTTG ATAAACCGAC GATTGAGCAT GCCTTGGAGT TGGTAGATGA      1680

GTATGAGCAG CTCTATGCGA CTATTGGTTG GCATCCTACA GAAGCTGGTA CTTATACAGA      1740

GGAAGTTGAG GCTTACTTGT TGGATAAGTT AAAACATTCC AAGGTTGTGG CTTTAGGTGA      1800

AATTGGCTTA GATTACCATT GGATGACAGC GCCCAAAGAG GTGCAGGAGC AGGTTTTTCG      1860

CCGTCAGATT CAGCTATCTA AGGACTTGGA TTTGCCTTTT GTTGTCCATA CCCGTGATGC      1920

GCTGGAAGAT ACCTATGAGA TTATCAAGAG TGAGGGCGTT GGTCCTCGTG GTGGTATCAT      1980

GCATTCATTT TCAGGACGC TTGAGTGGGC AGAGAAGTTT GTGGATCTTG GTATGACCAT       2040

TTCCTTCTCA GGAGTGGTGA CTTTTAAGAA GGCAACTGAC CTCCAAGAAG CAGCTAAAGA      2100

GTTACCTTTG GACAAGATGT TGGTGGAAAC AGATGCGCCT TACTTAGCAC CTGTACCCAA      2160

GCGTGGTCGT GAAAATAAAA CAGCCTATAC TCGCTATGTG GTCGACTTTA TCGCTGACTT      2220

GCGTGGTATG ACGACAGAAG AGCTGGCGGT AGCAACGACT GCAAATGCAG AACGAATTTT      2280

TGGACTGGAC AGCAAGTAAT GAAAGAGAAA ATTTCTCAAG TTATCGTGGT TGAAGGGCGT      2340

GATGATACGG TCAATCTCAA ACGTTATTTC GATGTGGAGA CCTATGAGAC TCGAGGTTCT      2400

GCCATCAATG CTCAGGATAT AGAGCGGATT CAGCGCCTGC ACCAACGTCA TGGAGTCATT      2460

GTCTTTACAG ACCCAGATTT TAATGGGGAA CGGATTCGGC GCATGATCAT GATGGTCATT      2520

CCAACAGTTC AGCATGCCTT TCTCAAGCGA GATGAAGCTG TTCCCAAGTC CAAGACCAAG      2580

GGGCGTTCTC TGGGAATTGA GCATGCCAGC TATGAAGACC TGAAAACGGC TCTAGCTCAA      2640

GTGACAGAAC AATTTGAACA TGAGAGTCAG TTTGACATTA GTCGTAGCGA TTTGATTCGC      2700

CTTGGTTTTC TAGCAGGGGC AGACAGCCGT AAGCGTAGAG AATATCTCGG AGAGACTCTC      2760

CGAATCGGCT ATTCCAACGG CAAGCAACTC CTCAAACGCC TAGAGTTGTT TGGGGTTACT      2820

TTGGCAGAAG TGGAAGAAGC TATGAAATCT TATGAGTAGG AAAGATGTAG CCGTTACAAT      2880

TTTTTAAGTT TCACAGTATT TTTCGAAGCA GGTAGAAGAG GAGGCGTCTG ATGTTAATTG      2940

GTCAAAAAAT TAAAGAGATT CGGATAGAAA AAGGAATTAG TCGTCCAGAT TTTTGTGGAG      3000

ATGAGCAAGA ACTGACAGTT CGTCAACTGT CGCGAATTGA AAGTGGAGCT TCGCAACCGA      3060

GTTTGCCCAA GTTAGACTAT ATTGCTCGCC GGCTAGGAGT TCCAGTTTAT AGCCTTATGC      3120

CGGATTTTTC AGCTCTTCCT TCTGCTTATT TAGAATTGAA ATACCAGATT TTACGTGAAC      3180

CAATCTATGG TAAAGAAGAG GAGTACGATA AGAAGGAAGC GTGTTTGGAA GAGATTTATA      3240
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921

AAACATACTT TGATAATCTT CCTAAAGAAG AACAATTAGC ATGTGAAGTA TTGCAGGCGT   3300

GTTTGGATAC TTCTAGAACT AGAAGGCCTG AATATGCAGA GTTAATACTT GAGGAACATA   3360

TGCCTCAGAT TATAGAAAAA GAAGCTTATT CAATAAATGA TATGTTGTTG ATTCGTTTGT   3420

TTTTTTATCA AATGCTCATT AGAAAGATC TTGCCAAATT TATAAATCAA ATCGAAAAGC   3480

TAATGCTCTT TCTTTTGGAA CAGAAGAAGG TAACTCAAAT AGAGAATTAC TTTATAATTA   3540

GAGATACTCT TATTTCAGGA ATGTGTTGTC TTGAAAAGGT AGGAGTAACT GATTGTTTTA   3600

ATGATTATCT ATCGTGTTTA CAAGAAATTA TGGATAAAAC TCAAGATTAT CAAAAGAAAC   3660

CTCTTGTATT TATGTTTTTG TGGAAGCAAG CATTAAGAGA AGAAAGAGAT TTTAGTTTAG   3720

CTGAATCATT TTATCAGTCT TCTAAAACAT TTGCGCAGCT AATTGGAGAT GAATTTCTAG   3780

TAAAGAAATT GACAGAGGAA TGGCAAGAGG ATGTCAAAAA ATATTTATAA ACATAGTGAA   3840

TCAGTGACAA AGATGTCCTT GTCCTCGTAT CAAAACAGTT CTAAAGTTCG TCTTTAGGGA   3900

TGTTTTTTTA GATATAAGCT AAAAATGACA CGAAATGGTT AGATTTTAAG GACATTGATG   3960

TCCG   3964

(2) INFORMATION FOR SEQ ID NO: 137:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 12666 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 137:

TGAGACCGTT ATTTGTATTA GGGAAATGGG TATCTATTTT TAATGCTGTG GGGATTTTGA   60

TTGTTTCTAT TATTCAAACC AAAAGCTTGT CAGGTATTGG AGCAGGATTG TTTAATCTAT   120

ATAACATTTC ATCTTATATA GGTGATTTAG TTAGTTTCAC TCGATTGATG GCATTAGGAT   180

TATCTGGAGC AAGTATAGCA TCAGCTTTCA ATTTAATTGT TGGTTTGTTT CCGGGAATAT   240

TGGCTAAACT GACAATTGGA TTAGTATTAT TCATTCTTTT ACATGCGATC AATATTTTTC   300

TATCGTTACT ATCAGGATAT GTTCATGGAG CACGTCTGAT ATTTGTTGAA TTTTTTGGTA   360

AGTTTTATGA GGGTGGAGGA AAACCATTTC AACCTTTGAA GGCTTCTGAG AAATATATTA   420

AGGTTATTAC AAAGAATTAA TGGAGGATAT ATATAATGGA ACATTTAGCA ACTTATTTTT   480

CAACCTATGG AGGAGCTTTC TTCGCTGCAT TGGGAATTGT ATTGGCGGTT GGATTAAGCG   540

GTATGGGGTC TGCTTATGGA GTTGGTAAGG CTGGGCAATC TGCCGCAGCT TTACTGAAAG   600

922

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CTAAGCATCA AGGAAATGTA GCAGTAGCGG GAATGCAAAT CTTGGCTAAA AGACCAAAAG        840

AATTCATGAA GGGAGCAATT TTAGCTGCCA TGGTAGAAAC CTATGCAATT CTTGCTTTTG        900

TCGTATCATT CATTTTGACC CTTCGTGTAT AAGAAATAAA TTTGCAATTC AAAGGAGGTG        960

TCTAAATGAG CAATTTAGAA AACTTACGAG AGTCTGTTAT TGAACAAGCT CATGAAAAAG       1020

GGCGTATGAA ATTATTGGAT TCCAAAAAGA AGATTGATGA TGAATTTGAA ATGCAAAGT        1080

CGCTCATTAT AAAGAAAAAA GAAGCTGAAC ATGAACGAAG GTTAAAAGAA TTGCAACAGA       1140

AATATCAAAT AATTTTTCAA CAATTAAAAA ATAAGGAACG CCAATCAACG TTAGTATCAA       1200

AACAGAAAAT ATTAAAAGAA CTTTTTCAAT CTGCTTTACT AGAAATGGAA TCTTGGAGTG       1260

CAGATAAAGA AATGGAGTTC ATCTATCGAA TTCTGGAACG ATATTCACAA CAAGAGGTCA       1320

TAGTAACCTT TGGGGAACGG ACTTTAGCTA AATTCAATTT GGAACAATTA GAGAAATTGA       1380

AATTCTCTTT TCCAAATTAT TTATTTAGTG AACAACCTAT CTCAAATGAA TCAGGCTTAC       1440

TTATTTCAAT AGGTAAAATT GATGATAACT ATTTGTATAA AACATTAATT GGATCGATTT       1500

CTAAGGAAGA AAGTTCAAGT ATCGCAAATC AAATTTTTAT CAATTAAGGA TGAAATTGGT       1560

TAATCCTTCT TAGAAATTTG GAGTATTCCA ATAAAATTAG AAAGGTATTT TATGGATACT       1620

AATCTTTTTT CAAAAATAAA TACGACGATT TCGGTAAAAG AAAACGATTT TATTACAGAA       1680

GAAAAATTTC AAAAAATTAT ACAATCCAAA GATACGGAGA CATTGGCATT TATCTTAGAA       1740

TCAACTCCCT ATCATTTATC GATTGACATC TTAGAAGATC CTAGTCAGAC AGAGATTTCG       1800

CTAATGACAA AATTAGTCAA TGATTATAGA TGGGCCTATG CTGAAAGTCC GTCTGATATA       1860

ATTGTGACTT TATTTGCTTT ACGATATGTT TATCATAATA TCAAAGTTTT ATTAAAATCT       1920

AAGGCGGCAA TTAAGAAAGA TTTTTCTAAA TTATTAATTC CAATAGGGAT TTTTGATATA       1980

GAAAGTTTAA AACATTTAGT TTCTTCCTTA CATTCAGATA CACTTCCTGA TTTTATGGTT       2040

CGTGAAGTAG AATCAATTTG GAATGAGTAT GAAACTTTTA ATAATATTCG TGTACTTGAT       2100

GTCGGAGCTG ATCTAGCATA TTTTAAACAT CTGAAACTTT TATCTAATGA GTTAGATGAG       2160

GTACTGTCTC AGGTTATTGT CGAAATGATT GACTTTTATA ATATTATTAC TGTAAAACGT       2220

GGTTTATCTC AAAATAAGAG TCATGGGGAT ATTTTACAAT TACTTTCAGA TGAAGGAAGT       2280

ATTTCTGCTA AAGAATTTAT ATACATTGTA GAAAATCAAG AAATATTTGT GTGGTTCAAT       2340

AAAATAAATC CAAGCTTAGA TTCAATCTTT TCAACTTATG AATTGAAGAT GCAGGACGCA       2400
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923

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ACAATTTCAT CTTCTGAGTT AGAATTTTTA TGTGATTTAC TATTGTATAA AACTTTAGAT    2460

CAAGGAAGGT ACAATGTAGA GGGGCCGTTA GTTCTTGCTA GATATTTATT GGGATGTGAG    2520

TTTGAAGTAA AGAATCTCAG AATGATCATA TCAGCTCTTC AAAATACAAT TCCCTTTGAA    2580

TCAATAAAAG AAAGGATACG CCCACATTAT GGAAGCTAAT AAGTATAAAA TTGGCATAAT    2640

TGGTAGCCGT GATATTATTT TACCATTTAG CATGATTGGG TTTGATATAT TTCCTGCCTA    2700

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ACCAAAGGGG GAGCTGCAGC AGTTCCTGGA CCGTTTGGAG CAGGAAAGAC AGTTGTACAA    3720

CACCAAGTAG CTAAATTTGC CAATGTTGAT ATTGTTATTT ATGTCGGTTG TGGAGAACGT    3780

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CGTGAGGCTT CAATTTATAC AGGAATTACC ATGGCTGAGT ATTTTCGTGA TATGGGCTAC    3960

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GGACGTCTAG AAGAAATGCC TGGTGATGAG GGTTATCCTG CTTATCTGGG AAGTCGTATC    4080

GCTGAATATT ATGAAAGAGC AGGACGTTCT CAGGTTCTAG GGCTTCCAGA ACGTGAAGGA    4140
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924

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ACGATTACTG CTATTGGAGC TGTATCGCCA CCTGGTGGAG ATATTTCAGA ACCAGTTACT    4200

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CGTCATTTTC CTGCAATTAA CTGGCTTACA TCTTATTCAC TATATAAAGA CAGTGTGGGC    4320

ACTTATATAG ATGGTAAAGA GAAGACAGAT TGGAATAGTA AAATAACTCG TGCGATGAAC    4380

TACTTACAAC GGGAATCTAG TTTAGAGGAA ATTGTTCGTC TTGTTGGAAT TGATTCTCTG    4440

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ACTGCGGCAG AGTATCTAGC TTTTGAAAAA GATATGCACG TTCTAGTTAT CATGACGGAT    5520

ATGACTAACT ATTGTGAAGC GTTACGTGAA GTCTCGGCAG CTCGCCGTGA AGTTCCAGGG    5580

AGACGAGGCT ATCCGGGATA TTTATATACA AATTTATCAA CTCTATACGA AAGGGCTGGT    5640

CGCTTAGTTG GTAAAAAAGG TTCGGTGACA CAGATTCCTA TTTTAACAAT GCCAGAAGAT    5700

GACATAACAC ATCCAATTCC TGATTTAACT GGATACATTA CTGAAGGGCA AATTATTTTG    5760

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CGATTAAAAG ATAAGGGATC TGGAGAAGGT AAAACTCGTG GAGATCATGC TCCAACTATG    5880

AATCAACTGT TTGCAGCCTA TGCCCAAGGG AAAAAGGTTG AAGAGTTAGC AGTAGTATTA    5940
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925

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GGAGAATCGG CTTTATCTGA TGTAGATAAA TTGTATGTGA GGTTTACAAA GCGTTTTGAA    6000

GAAGAGTACA TAAACCAAGG ATTTTATAAA AATCGAAATA TAGAAGATAC GTTGAATCTT    6060

GGGTGGGAAT TACTATCAAT TCTTCCTAGA ACAGAGTTAA AACGTATCAA AGATGATTTG    6120

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ATTTGTCCTG TTCTTATTTC ATTTTACTAT AAATCCATCA GAAAGTCGTG ATTTCTATTG    7680
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926

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ATGACATCTT CCAAAGTTTA AAAGGCTTTA TTCTTAAATC CACGTTTACG AATCTCTTTC      7860

CACACTTGTT CAATGGGGTT CATCTCTGGT GTGTATGGAG GAATAAATGC AAAGCCAATA      7920

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TTAGGAGCTA AAGGTTTAGC TTATTGTGAT CAGTTATTTT CCTTGGAAAG AGACTGGGAG      8700

GCTTTGCCAG CTGATGAACG ACTACAGAAA CGTCAAGAAC ATCTCCAGCC CTTAATGGAA      8760

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CGAAAACCTA AATTAAGTCT AGAAGACCTT CTTATGGCCA CTCTTCAATA TGTGCGAGAA      9480
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927

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CTCAGTTCTG AGGACACGGT AATGATTGAT GCGACGGAAG TAAAAATCAA TCGCCCTAAA   9660

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TGTCACAAGT CAAGGGAGAA TTGTTTCTTT GGATATCACT GTGAACTATT GTCATGATAT   9780

GAAGTTGTTC AAAATGAGTC GCAGAAATAT CAGACAAGCT GGTAAAATCT TGGCTGACAG   9840

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CTCAAGTACA GCCTGCGGCT CGCTTCCTAG TTTGCTCTTT GATTTTCATT GAGTATAAAA   11160

AGGGTCAAGT AAGTATAGTA AATTGAAATA AGATATGAAC AAATCGATTA GAAAAGTCAA   11220
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928

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ATTAATTTCT AGAAATATGT TAGAAATTGG TTTGAATTCC GCAATCAATT TGTTCAGTTT    11280

TTATTTCATT TCATTTTATT TAATTAGATT TTCCAATTTT TTAATTCAAG CTAAAAATCC    11340

CCAATCGTAG TGATTGAGGA TTGAGTAAAT AAATCTTAAA CAATACCTTG TGCAATCATG    11400

GCATTTGCTA CATTTTCAAA GGCAGCAATG TTAGCTCCTG CAAGGTAGTC TTTATCAAGA    11460

CCGTATGTTT CTGAAGTCGT TTTAGCTGTG TTGAAGATGT TTGTCATGAT GTCTTTGAGA    11520

CGGCCATCAA CTTCTTCACG AGTCCATGAG AGGCGAAGAC TGTTTTGGCT CATTTCAAGA    11580

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ACCAAAAGAT CGAAGTCGAT ACCATTTTCA TCGATGACAT AACCATTTGA GTCAGAAACA    11940

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ACGCGCTCAG GCTCAGTAAT ACGTGCCAAG ATATTTTCTT CGATATACTC AGGGTGTTTT    12600

TCAAATACAG GTTCTAAAGT GTTGAAAAAT TCTTCAACAG CTTGGAGGAA TTCAGCCTCG    12660

TGCCGG                                                              12666
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(2) INFORMATION FOR SEQ ID NO: 138:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3083 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

929

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 138:

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AGCAACTGTT GTGAACCAAT TCCGATAAAT TCCAAGAATT GGTTAATAGA GCCATTTTGA      60

CCAAAAATCC CGATAAAAGC ATAGGCTTTA AGGAGCAAAT TGATCCAGGT AGGAAGGATA     120

ATCAGCATGA GCCAGAGTTG ACGGTGTTTG AGACGGGTCA AAAAGAGGGC CGTCGGATAA     180

CTGATAAGCA GTGCCACAAA GGTCACAATG CCTGCATAAA GCACTGAGTT GAAACTCATT     240

TTAAGATAGG TCAAGTTTTG TGACGCAAAG TAAGATTTGT AATTTTCTAA ACTGAACTGG     300

CCTTCGATGT TGAAAAAGGA TTGACCGAAA ATCAAGACCA AGGGTGCCAA TACAAAGAGC     360

GCAATCCAAA GCATGTAGGG TACTACAAAG AGTTTAGAGC TTGTTTTCTT CATCTCTTTC     420

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GGTGTAGAAT TTCCCTTCTT CCAACTCAAA GTTGATGTCT TTGAGAACCT TGGTGTTGCT    1500

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ATTCCTTCTT TTTCATAGAT TAACCGATCG GGGCTCTGTC AGGTCCCCAC TACCTCTTGC    1620

AGGGAGTAAA ACCACCTGCA TACATCTTCG CTACCGATAG GCTTTCACCC AAGATCCGGA    1680
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930

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AGTCCTCGTA GTCTTTGGCC GTTCCATCTG CGACATTGAT CATAAATCCT GCATGCTTTT    1800

CTGACACTTC TACGCCACCG ATACGATAGC CTTTCAAGCC AGCTTCTGAA ATTAACTGAC    1860

CTGCAAAATG CCCGACTGGA CGCTTAAAGA CCGAGCCACA AGATGGGTAT TCCAAAGGTT    1920

GCTTGAGTTC ACGTAGGTGC GTCAAGCGGT CCATTTCCTG CTTGATAACC TGATGGGTTC    1980

CTGGAGCTAG GGCAAATTTA ACTGACAAGA CAACTGCACC AGACTCCTGA ATAGCTGAAT    2040

GACGGTAACC AAAAGCCAAG TCTTTAGCAG ACAGGGTTTC GATTTCTCCA TCCTTGGTCA    2100

AGACCTTACA AGACTGCAAG ATGTGAGCAA TCTCGCCACC ATAGGCACCC GCATTCATAA    2160

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CATCACGAAC GATGATATTG CTTGCATTGC CAAGAACCAT CCAAGGGATA TTTTCTTGGT    2400

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TTCCATAGGC GACCAGAACG AGCTCCAGTG CTAGAATCAC TTCAACCAAG ACTGGATTTG    2760

TCAACCAGCC TACTTGGAAA AGAGATGGTG CCAGATCAAA GAAGGCATGC AAGCCATAGG    2820

CTGCTAGGAG ATAAATCCAT TTCTTCTGGC GAACAGCTTG GTAAACCCAA ACTGTCAAAA    2880

GTAATTGGAA ACCAAGCGCC AAGATTCGCT CAAAACCAAG CAAATAAATC TGCCAGACCG    2940

AAAGTGACTG AATGGTTTTT AACATATTTT CAGACAGTAA TTGCATAACC TGTGGATTCT    3000

GAGTTTGAAC TGCCGAAAGA ACAATGTAAA GATTGAGTAA ACTAGTAAGG CCTAGAAAAA    3060

TCAACTCCAA GCCACCATGC CCC                                            3083
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(2) INFORMATION FOR SEQ ID NO: 139:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 15363 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 139:

931

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CCGGAGGATA TTGACCACCA CCAAAAGCAG GGGGAAAATC GAAATCAACC AATAGTAGGC        60

TACTGCGACA CTGGTCAACT CACTATCTGA TGCTTGATAA TAATGCAAAA AAGCTTTTAA       120

TAAAGGTTTG TCTATCAGCT CTTTCCACCA CTTTTTCATG TCATACTCCT TCACTTATAA       180

TCTTATACTC AATGAAAATC AAAGAGCAAA CTAGAAAGCT AGCCGCAAGC TGCTCAAAAC       240

ACTGTTTTGA GGTTGTAGAT AAGACTGACG AAGTCGATCA CATACATACG GTAAGGCGAC       300

GCTGACGTGG TTTGAAGAGA TTTTCGAAGA GTATTAACTA ATTTCTTCTT ACCAATTCCA       360

CCATATCATA CGGTAGGGTA TTGGCAGCTT CCTTCAAGGA ATAGTTCTCT AAGTTATTTA       420

CATTTTGTCG TAATTTCTTG GCATACTTAG TCGTAATCAA TCGTTTTTCT TCGTATTCGA       480

AAATCAACTT GCGCTCCAGA TAATAGCCTC TCAGCATTTC ATCGATATTG TTGGGTTTGA       540

CACGATTGAT AACCCGTTCG ACAAAGGCAC CACTGCTGAT AATAGCTGTT TCTCGAAGAC       600

GAGACTCCTG CATAAAACTA ATCAAAGAGC GTCTGTAGAC TCCCTTCAGG TTTTCCAAAC       660

TTTCAATAAT CATCTCTGTA TTGGCAAGAT AGAGCTCTGC AATTTGGTCA TAATCAAGAG       720

CACGGAGACG GCTTTGCTCC TTGTTCTTCC AGCTACGGAA GGTCTTTCCG AGAGTAAAAA       780

CTTCATGAAG GAGAAAACGT AAAATCCTCA AGGAAACAAG AAAATAATAG GTCAGTCTTG       840

AGGCAAGTTT ACGATTGATT CCTTGTTCTA TATTTTTCAG ATAACGTTGG TAAACTCGGT       900

AAGCACGATT GCTAATGTTC CCCTCTTCAT AGGCCTGTTC CAAACCATCA CTTTCAATAC       960

TAAGAATCAA GAGTTTCAAA GCAGCCCAGT CTTCTTGATC ATCCTGGTTT TCTTGGCTTA      1020

AAATGAGATT TTCAATACGT CCATGATAAT TGTCAATAGC CGCATAGAGG GGAAGTTTAT      1080

TTCTGGTGTC TTCCAACTCT TTTTCCAACT CTAGCGTTAC TTCATTCAAA ATGGCGATAT      1140

GCATAAGATA ATCCTTGCTT TCTTCCTCTT CATCAGAAAG ATGAGGCAAG ACCAAGAGAC      1200

CTGTTAAAAA GCTAACAAGC GTCACACCTG CAACAAGGAA AAGCAAAGA GGATACTCCT       1260

GTTCTAGATT ACTTGGTATC AAGAGAATCG TAGCAATCGA CACCGTTCCC TTAACACCTG      1320

AAAAGGTCAA GAGAAACATG TCCTTCATAT ACTTATTTAG CTTTTTCTTG AGGCGTCGGG      1380

TTCTATAGGC ATAATAGCCA TAGATCATAA TAAAACGAAT GACAAAAAGG ACAAAGGTAA      1440

GGGCGATAAG AGATAGCAAT AAAAGTAGAG GATTATAGAT TGGATTGGTC AAGATAGGTT      1500

CTGCTATCAT TTCCAACTCC ATCCCTAAAA TCACAAAGAC AGAACCGTTG AGCATAAAGG      1560

TCACTGTATG CCAGACCGTC TCGGTCACCG TATCCACTTG GGCTTCGAGG AGCGTGATTT      1620

TCTTGAAGCG ACTTGCCTTT AAAATTCCAG CAACTACGAC GGCAATAATA CCTGAAACAT      1680

GAACTTCTTC TGCCAGAAAG AAGGTCACTA GAGGCAAACT CAATTCTAAT AAAAGTTCAC      1740
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932

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TGGCAATATC CGTTGCGCGC ACACTTAGCA AGAAGGTATG GAGGAAGCGG TTGGTCATGG   1800

CTGTTAAAAA TCCAATTAAA AAACCGCCTA GGATTGAAAA GATGAGCGAA CTGCTAGCTT   1860

GCCCCAGAGA AAAAGCTCCA GTTGTCCAAG CTGTCAAAGC TACCTGAAAA GCCACCAAAC   1920

CAGAAGCATC ATTCAAGAGT CCTTCGCCCT TAAGAATATT GGACACGCGC TTAGGAAAGC   1980

TAAAACGCTC CGAAAGAGAG GCAAAGGCCA CCAAGTCCGT AGGACCAAGG GCTGCCCCAA   2040

CAGCCAAGCA AGCTGCCAAG GGAAGGCTGA ACCAAAGAAG ATGGGCCAAG CCACCCAAAC   2100

TCAGGGTCGA GATAAAAATC ACTGGAAATA TGAGATAAAC AATGATTCGC CAGTGTTTTA   2160

AAATAGCCGT AACATCTGCT TCTTCAGCCT CTCGGAAAAG CAAGGGTCCG ATAACCAGTG   2220

CCAAAAACAA CTCCGTATTA AGGTGAAAGT CAGTATTGGG TAAAAAGAGA CCAATCACAA   2280

TTCCCAAAAG AATTTGGACC AAAGGGAGAG GCAAAAAGGG CAGGAGCTTA TTGGTTGTAC   2340

TTGAGACAAT CAAAACCAGT AAAAATAGGA TGAGGTAAAT CAGTAATTCC ACGCACGTCC   2400

TCCTTAATCT TTTTTACAAC AGGATTCAAA TATCTCCTTC TGCTCTTTGA TTTTTTGGTC   2460

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TAATTTTTTC TTGATTTTAA GCATTTTTTT GCTCATATGC GCTTGGTCTA GCACGCCCAT   2580

CGCTCGTTCG TGGTGGGTTG ATTCAACAAA ATTCTGGCGC ATGGCATCCA GCTTTTCGTG   2640

TAAGTATTGT TTATCCATGT CTGTATCTCT CTAATTTTTC AATCATCACT AAAAACGGCG   2700

GGTTGTTGAC TTGGTTTAAA GTTCGGTAAA TGGCAGCTGT GTACTCTTGT TGGTTCAACT   2760

GGATCACAAA ATCCAAGACA GCATCTCTCT CGAGATCGCC TCCTTCATGA CCATAGTAAA   2820

TCATAATAGC AATTCGTCCA CCTTTGACAA GTAAGCCACA TAGCTTTTCT AATGCCTCAA   2880

TCGTTGTCTG CGGTCGGGTG ATGACAGACT TATCAGCTGC CGGCAAATAG CCCAGATTAA   2940

AAATCCCTGC CTTAGCTTTT ATCACAAACT GGTCCAGTGT CTCATGGCCT TGCAAGATTA   3000

ACTGGGCATT TGTCAAGTCA GCCTGATGCA AACGCTCTTG GGTCTTTTCC AAGGCTTGCT   3060

TCTGAATATC AAAGGCATAG ACTTGCTTGG CTAGCTTGGC TAAAAAAAGC GTGTCATGAC   3120

CATTTCCCAT AGTCGCATCC ACTACGACAT CCTCTTTTGT CACGACCTCA GCCAAAAAAT   3180

CATGTGCCAT CTCAAGTGGT CTTTTCATTT TCAAACTCCT GTTTTACAGC CTTGCATCCT   3240

TGAACACTTC CACGACGTCG CATCTCCATC TCAATGCTGT TGAGGACTTC CCATTTATTG   3300

AGGCTCCACA TAGGACCAAG CAGCATATCC CTAGGCGCAT CTCCTGTAAT TCGATGGATG   3360

ACGATATGTT TGGGAATAAT TTCCAGTTGG TCACAGATGA CCCTGACATA TTCGTCCTGA   3420

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TGGAGCAAAT GCAGTTTAAT CCCTTGAATA TCGTTATCCG TGACACAACG GCGGACATTT   3540
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933

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ATTTTTGGAT ACTTTCTCAA ACGCTTGACC GTTTCCACCT ACAATTCATA AGAATGCGCA      3660

CGGTTAATCA GGTCAGAGGT TGCTTCATAA GTAGTTTGCA AGCCCAATTC AACCGTCACA      3720

TGCATGCACT CCGATAACTC AGCCAAATAT TCGATGGTTT CGTCTGGTAA ACAGTCTGGG      3780

CGCGTTCCAA TATTGATTCC TACCACACCT GGCTCATTGA TAGCCTGTTC ATAACGCTCT      3840

CGAATAACTT CCACCTTTTC ATGGGTGTTG GTAAAATTTT GAAAATAAAC CAGATACTTC      3900

CGAACATCCG GCCACTTGCG GTGCATAAAG TCAATTTCCT TATAAAATTG CTCACGGATA      3960

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CCATGAGCCA CAGTCCCATC ACGATTGGGA CAATCAAATC CCGCATCAAT AGGGACTTTA      4080

AAAGTCTTTT CTCCAAAGAG TTTTCGATAA TAATCATTCA AGGTATTATA AGATTTCATG      4140

ACTTTCATTA TAACAAAAAT CACCCACAAT CTCAAAAGCC TGACTTTCCT ATAAATTCCT      4200

CTGTTTCTCG TTTCCATTAG CCTTTTTTTA TGATACAATA TGGGTATGAT TTTAATGAAA      4260

TTAGCATCTA TTTTATTATT GATACTGACC TTAGTCGTCT GCATTATCCT AACCAAACTT      4320

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GAGTATTACT TGATTACAGC TAAAACCTTT ACCCATAATT TCCTCCCTAG ACTGGGGCTA      4440

GCCCTCTCGA TCCTAGCCAT TATTCTCGTC TTTTTCTTCC TTTTGAAAAA ACGCACCTTT      4500

TACTACCCTA AATTTATCAA ATTCTTCTGG CGTGCAGGAT TCTTATTAAC CCTTATCATG      4560

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TTTTTGGATG GTTACGATAG TCTTGGTAAA ATAGAATTGC CCAATAAACC ATTTAGAAAG      4800

GCTATCCCAT GCATATTCAC TATAACACAA ATCAAACAAC TTTACCACTA GAAATCAGTT      4860

CCTTCTTACC ACAAGATCAT CTCGTTTTTA CTATTGAAAA AGTGGTGAAT ACCTTGGAGG      4920

AACGTCACTT CTACACCTCC TATCATGCCT TTGATCGCCC GTCTTATCAC CCTAAAATGC      4980

TTGTATCTAC TCTTCTATTT GCCTATTCAC AAGGGATTTT CTCTGGTCGA AAAATTGAAA      5040

AATGGAAGAG TTAGTGACCT TAGATTGTTT GTTTATTGAC AGAACTAAGA TTGAAGCCAA      5100

TGCCAACAAG TATAGTTTTG TGTGGAAGAA AACGACAGAG AAATTCTCCG CCAAACTTCA      5160

AGAACAGATA CAGGTCTATT TTCAAGAAGA AATCACTCCC CTTCTGATTA AATATGCCAT      5220

GTTTGATAAG AAACAAAAGA GAGGGTATAA AGAGTCAGCT AAAAACTTAG CGAATTGGCA      5280
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934

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CTATAATGAC AAGGAGGATA GCTACACACA TCCTGATGGC TGGTATTATC GTTTTCACCA      5340

TACCAAATAT CAGAAAACAC AGACAGACTT TCAACAAGAA ATCAAGGTTT ACTACGCCGA      5400

CGAACCTGAA TCAGCCCCTC AAAAGGGACT GTATATGAAC GAACGCTATC AAAACTTGAA      5460

AGCTAAAGAA TGTCAGGCGC TTTTATCTCC CCAAGGTAGA CAGATTTTCG CTCAACGCAA      5520

GATTGATGTG GAACCTGTCT TTGGGCAGAT AAAGGCTTCT TTGGGTTACA AGAGATGTAA      5580

TCTGAGAGGG AAGCGTCAAG TGAGAATTGA CATGGGATTG GTACTTATGG CCAATAACCT      5640

CCTAAAATAT AGTAAAATGA AATAAGAACA GGACAAATCG ATAAGGACAA TCAAATCGAT      5700

TTCTAACAAT GTTTTAGAAG TAAAAGTGTA CTATTCTAGT TTCAATCTAC TATACAATAA      5760

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GGTCTTTAAT GATAAAGAAG GTATCAAAAT TTCTAGTCTT CTTTTTTACC TTTAGTAACT      5940

ACTAATCCTG CACTCAAACC TAGAAGAGTT AAACCTGCTG CTACTGCTGC TTGGCTTGCC      6000

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935

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TCAGCAACAA GGTTACTACC AAGGACACGG CCTCGAACAG TAAATTGACC TGCTTTTGTC    7260

AGATTTTCCG CTGGAACTTC TTCCCATTCA ACTGTCAGGT CTTTTGTTTC GTAGCCGTCT    7320

TTACCTGTGA AGTAAACTGG AACCTTAGTC GGCAATTCAA GTGCTTGACC TACTTGTAGC    7380

AAGCGAGCTT GTTTAACCGC AGCAACTGGT TTATGAGAAA GTAAGCTCTT ATCCTTAGTG    7440

AAGTGCAGAC GGTATTCTCC TAAGATGTCG CCATTTTCAG CTTTCGCGAT GACACGAACT    7500

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TTATGCAACT CAAGCATTCC TTTACGAATT GCGACTTCCC CTTCACCACT TGTAGAGAAG    8820
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936

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GCAATTTTTG GCGCTTCTTC AAGGAATTGA ATTGCATAGG TTTGAAGAGG GCCACCATCT    9000

TTAGGCTGAA TAAAGATGCT CGCACGCATG CCGTTTGCTG CGCTTGCTTG AAGAACTGTA    9060

ACAGCTGCAT TTTTAGCACT TGCTGTGACT TCTGGCAACT TAGCTCCATA AGCAAGAGTG    9120

CGGTATTGCA TTGGTTTTTG ACTAGTAAGA CCTGTTACTG CCTCACCACC AACCGTTACA    9180

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937

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TGTTTCAATT CACGTTCAGG GCGATAGTAA CTTCCACGTG TACGGGTAGC TGAAGATGTT      10680

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TCTGCTTTAT AGTTTTCTTC TGCTCCAAGC GCCCCATGGT CGTGGTGCAA GGATACTCCA      11280

TGGAATTTAA TACGTTCACC ATTCAAAGAG AAACCTTCAT TTGGAGTCCA GTGATAGTAA      11340

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TCTAAAATCG CATCTAGGCT TGTTGATTCA TGTGCTTTTA AGGTACGACT CGCTGTACGA      11520

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TGATTCACTT CTTCATTTGT TACAGCTTTA GCATCTTCCT TGAGCGGTTT TTCTTGATTT      12240

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TTTGGAGTTA CGGCTTCATC TTCTTTCTTC TCAGATGCAA TAGCCTCAGT TGAACTAGGT      12360
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938

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TCACTTTGTT CTGTCCTTTC AACTATATTT TTAGTTTCCA AAGCTTTATC AGCCTTTTCT    12420

TCTACTATCA TTTTTTCCTC TTTAGGTTTC TCAGCAGTAT GAGTAATAAG TGTTTCATCC    12480

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ATTACTGAGC AAGCTCCCAC AGCAAACTTA CGAATGCTAT AAACTCTTTT CCGATTCCAA    12600

TGGCCTTTCC CCATAAAACC CTCCTTATAT TATATTTAGT GCAGTTAGCT ACTACCAAAG    12660

CCCAAGTGGT ATACATGGTA TGACAACCTA GTTTCAACAA TTTACACTCT GCGAAAATCC    12720

AATTCAAACT TCGTCAGTGT CGCCTTGCCG TAGATATGAT TACTGACTTC GTCAGTTTCA    12780

TCTACAACCT CAAAACCATG TTTTGAGCTG ACTTCGTCAG TTTCATCTAC AACCTCAAAA    12840

CCATGTTTTG AGCTGACTTC GTCAGTTTCA TCTACAACCT CAAAACCATG TTTTGAGCTG    12900

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CTAGTTTGCT CTTTGATTTT CATTGAGTTT ATATTTTATA GGAGCGCATT ATTTTGCTTT    13020

TGCTGCGTAC TCTTCGTTAC GTTTGATCAT TTGTTTTCTG TACCAAGCAA AGATACCGAT    13080

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CATGATTGGT GCAAGTACGT TGGCACAAGC CCAGATTTCA GCACGACCAG CGATGAATGG    13500

CCAGTCAAGA CCGATATTGA ATTTACGTCC TTGAAGACGT TTAGTAGCAA CGTTTGTAAT    13560

ACCTTGTGAT AGTGGTTCTA CGGCTGCGAT GAACCATGAA CCGATAAGTG AGAAGAGTTC    13620

CAAAGATACA CCGGCAGTCA AACCAAGAGA CAACCATCCT TTGATAACAA GACGCCATTT    13680

ATCTGCATCT GCAACACCTG CAATTGGATG TGGAGTTCCC ATAATACCGA TAACGATACC    13740

AAGGATGAAA CCGATGAAGA ATTTAGATCC CCAGAAACCG ATTTTCTTGT TCAATTTAGC    13800

AGCATCAAAG TCATATTTAT CAAGGCCTGG GAAGAATTTT TCAAAAATCT TATCCAAAAC    13860

CATGATAACT GGGTTCATCA TGTAGTTCAT GTGAGTTGAT GTCATTGGTG ATGAACTTGG    13920

GGCGTTAAGA AGGTCATCAA ATGTAGGTTT CATCAAGTCA GAGTTGATAA TTTTCAACAC    13980

ACCGACAAGG ACGATAGCTG CTGTAGCAAT AAAGAGTGAA ACCCCTTGAC TCACACCATT    14040

GTTATCAGCA TACCATTTAA TCAAGAGACC TGTGATAGAC AAGTGCCAGA TATCAAAGAT    14100

ATCGACATCA AGTGTATCTG TTTTCTTCAT AGCTAGCATC ACTATGTTGA CAATCAACAT    14160
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939

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GATGAGCAAG AAGTATAGTG TCCAAGCAGA ACCCCAAGTG ATTGTAGCAA GTGGTGCCCA    14220

ACCAACGTCG GTAATACTCA ATTGGATACC AGTGTTTTCA ACGAATTTTG CTAGTGATGC    14280

TGAGAAAGCA GTGTTTAGCA TACCGATGAT AGCACCGATA CCTGTAAGAG CGATGGCAAG    14340

TTTGATACCA CCTTCAAGCG CTTTGGAGAA TTTCACTCCA AAAAGTAAAG CCAATACTGT    14400

CAAAATGATT AACATGATGA CAGGTCCACC CATTTCTAAG ATGGGATTGA AAACCTTTCC    14460

GATTAGGTCA AAGATTGCAT CCATAACAGT TCCTCCCTTT TTGATGTTAT ATGAATGTTA    14520

ACAAATTAGA ATTAGCTTAA TCCGTGTTCT TTAATAGCTG CTTCAATATT GTCAAATACT    14580

GGAGCGCTCA TTGCTGGGAT ACGGAATAAG ATTGGCCCAG CTTCGATAAC TGGGATACCT    14640

GGTTCAAAAC CAAGGTCTGT TGCAGCGATT GGTGTAAAGA TATCGTAACC TTTCATAAGG    14700

TCTTCGTTTA CATCTTTCAC CATGACTGCA TCACAGTGAA CATCATAACC ACGGTTTGAA    14760

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GCAAGAATTT TAATCATTTA GATTTCCTCC GATTTTATTT TTTAATAGAC AAGATTAAGC    14880

GGTTGCTTCA GCAATGTAAG TATAAAGGGC TTCTGGTTCA GAAATTTTTG ATAGGTCTTC    14940

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ACTTGAATTA TTAATGATAA AGAAGAGTAG GGATACTTCT ACTTCCTTAT CAGGAGCTAT    15060

CATATTGTGA AAAGTTATTG GTTTTTCTAA TCGAACAACC ACCACTTTCT CAGCTAGATT    15120

ATGAACAATA TCTGTGTGAG GAATCGCTAC ATTTGGCAAG TCCTTTCCTA GAAATTCCAT    15180

ATCTAAACCA GTTGGAAATG ACTTTTCACG CGTGATCAAG GCTTCACGAT AAGTTGGAGT    15240

GACAATTTCT CGTTCTTCCA ATAAAGTTGC AACCTGATCA AAGAGTTGTT CTTGACTATC    15300

CGCTTCTAAG CAAAACACAA GGTTTTTGTC AAAGAAATAA TCTAATACCA TAAGTTTTTC    15360

CGG                                                                 15363
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(2) INFORMATION FOR SEQ ID NO: 140:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 28882 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 140:

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TAAGACTATT TAATAGTGGA GTGAAATAGG ATACGAACAA ATTGATTAGG AAAATCAAAT       60

GAATTTATAG AAATCTTTTA GCAGTTATGT TATCCTATTC TAGTTTCAAA ACGCTATAGA      120
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                                   940
AGCAGCATTG TGCTAGTCkA GATTCAGTTT ACTATACTAA AACGAGTAGC TTGAAATCAA      180

AAAACCCACC CTCACAGGCA GGTTTTATCT GTATTATTCA GCTAGATTAT GCTTTACCTT      240

CTGAACCGAA TACGTCGATA CGTTCTTCAA CCGATGCTTG GATAGCTTTT ACACCGTCAG      300

CCAAGAATTT ACGTGGGTCG AAGAGTTTTT TCTTGTCGTA TTCTGCTTCG TTTGCTTCGT      360

AGTCACGAGC AAATTTACGA GTTGCGTTAG CGAATGCGAT TTGGCATTCT GTGTTAACGT      420

TAACTTTGGC AACACCAAGT TTGATAGCTG CTTGGATTTG CTCATCAGGA ATACCTGATC      480

CACCGTGCAA TACGATTGGG AATCCTGGAA GAGCTTCTGT CAATTTTTGC AAGTGGTCAA      540

GGTCAAGACC TTCCCAGTTT ACTGGGTAAG GACCGTGGAT GTTACCGATA CCAGCTGCCA      600

AGAAGTCGAT ACCAGTTTCA ACCATTGCTT TAGCGTCTTC GATTGGAGCC AATTCACCTT      660

TACCGATGAT TCCATCTTCT TCACCACCGA TAGTACCAAC TTCAGCTTCT ACTGAGATAC      720

CTTTAGCGTG TGCTTTTTCA ACAACTTCTT TAGCCAATTT AAGGTTTTCT TCAACTGGAA      780

GGTGTGAACC GTCAAACATG ATTGAAGTAT AACCAACTTC GATACACTCA AGTGCATCTT      840

CGTAGTGACC GTGGTCAAGG TGGATAGCTA CTGGTACAGT GATACCCATT GATTCAACAA      900

GGTTAGCGAT CAAGTTGCGA GCAACTTTGT AACCACCCAT GTATTTAGCA GCACCCATTG      960

AAGTTTGGAT CAAAACTGGA GCTTTTTTAG CTTCTGCTGC GCGCAAGATA GCTTGAGTCC     1020

ACTCAAGGTT GTTTGTGTTA AATCCACCAA CTGCATAACC GTTGTCACGG GCTGCTTGGA     1080

CAAATTTTTC TGCTGAAACG ATTGCCATTT TATCAGGCCT CCTGTATATT TTTATGGGTC     1140

ATCCCATTTA CATTGTTCAT TTTATCACTT TTTGCCAAAA AAATCTAGTT TTTCCCGCAG     1200

TTTCGATTGA TTTTCTTCTA ACTCCATCTA TGTAAACCCT TTCTCTCCCT AGTCTTGGAC     1260

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GCTATTTTCG ATAAAAAGTT CTCCTTCTCT TTCTCCAATT CGAACTAAGC CACCTGGAAC     1500

AGAGTGCTTA ATGGCATTGC TGATGAGATT AGAAAGAATC AACTTCATAA CTGATGGGTT     1560

TAGATAAGCC TGCTGATGGG TCAAACTATT GTCTATCTGG AGCTCTCTTT CCTTGGCTAG     1620

CAAGGCATAA TCTTTGACCA GATTTTGCGT CATCTGGAGG AGGTCAATTG TTTCCCTATC     1680

ATCTCGCAAT TCCTGCACAG AAGAGAGGGA AAGTATCTGC AGAACATGGT GATTGAGTTC     1740

ATCCACAATC CCCAAGGCAA CTCCCAGATA CTGGTCTCTA TCCTTATAAC GACCGATATT     1800

CTCTCTCATA TTTTCGATTA GGATTTTCAA ACTAGCCAGC GGTGTTTTCA ATTCATGAGA     1860

AGCTCCTCGT AGGAATTCGA CCTTCATCTT CTCCAGCTGG AGAATGGCTT CATTCTTTTC     1920
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941

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ATGCAAGTCC GCAATAACAG TCAAGAGATG CTGGTAGAGG CTATTGATTT GTTCCTTGAG        1980

ATTACCTATC TCATCCTTAG AATCCACGCG CAATCGCACT TGGGAATCCA GGTCCATCAT        2040

CCGACGGGTC ACCCGCTTGA TTTCCAAAAT CGGTGCAACA ATAGTCCGAG CGTAGATGTA        2100

GGCCACCAAA AGGGAAATCA GAAAGGAGGC CAGCAAGGTA TAGGGAAGAA ACTGGAGACT        2160

GATTTGCTCC GCTTCCTTTT GTAAATCCAT GGAAGCTAGA AACTGGAGAA TCATAGTACC        2220

ACCGTCTTGC GTTTTCACCT CGCGCTCCTC AATAAAGAGA GAGGTTGTCT GGCGGTCTGT        2280

GTCCAGAGGA AGACTGTCCT TGACTTCTAA CTTGTCCTCG GTCATCTCAC CTTTGACGGT        2340

CCCCTTGATA TCACTAGTCT GGGAATACAA GTCTAACACT TGCTCGATAC TCTGCCTATC        2400

TTTCCCTTCT AGGGACTGGG CAATGGCTGT TGCCTTTTGA CCAATGGTTT CCTGACGATG        2460

ACTCAGATAA GTCGAAGGAA AAAGAAAATA AATAGCTAAA TGAAGGCAGA TAACCAGAAC        2520

ACTAAATATC GAGAAGGTAT AGATAAATAT CTTTGCAAAT AAACCTGTTC GTTTCATTTT        2580

CGCTCCAATT TATAACCAAC ATTGCGCACA GTGAGGATAC AATCCAAGTC TAGCTTTTTC        2640

CGCAATTCCT TGATATAAAC ATCAATAACA CGGTCAAAGG GAACCTCATC TGTCGCTTTC        2700

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TCCACTATTC TTGAATAGAA ACACAAGATG CAATCTTTAT TCTAGACTCA TTTTTTCAAA        3540

TTTATTCACC ATCCAGCAAG AGCTCTTTTG GTTGTTTTCT AAGGAGATTG CTTGAAGCAA        3600

GCGCCATAAC GAGAACCACT AGAACCAAGG CAAGGACAAA AATGATGATA AAGTCTGATG        3660
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942

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TGGCAAGGAC AGTGTTTCCA ATTGCACGGG CAGTGTAATT AGCTAGGAAG TAAGCAGAAA        3840

CTAGAGCAGG GATAGCAATC AAGATAGATT CGGTGATGAA TTGACCCAAG ATACTTGCCT        3900

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TGAGCAAGAG GGCAAGGAGG AGAACTGAGA AGCTCAAGCT ACCCCAGAAG AGGAGGTTGG        4020

CCATCTTGTA CATACCAGAG ATAGATTGCT CAAGAGCTGG GTAGTTAGAG GAGCTCTTGA        4080

CGAGTGTGTA GCTCTTCCAG TTGATACCAC TGATGCCATT CAACTCTTTC ATAACATCAT        4140

CCAAGTTCTT GTCTGCTGTT ACAAAGAAGG TTGCGTCCCC ATAAATGGCT GTGTCTTCTG        4200

TGTATCCATA AAGTTTTGCA GCAGTGTGAA TGTCTGTAAT AGCTGTGTTT TCGTAAAGTT        4260

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CACGATCAGC AGTGAGATTC TTCTTGGTTT CTGGCGTTTC AATCAGGTCA TATCCAGTCA        4620

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AATCTATCAA GTTATAATTT TGAAAGACCA GGGAAATATG GTGCATGCGA TGGTAAGAAT        5400

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943

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AAAATTTTCC GGGTTCAAAA TTATAATTGA TCTGATATAG GACTGCTTCA GCAGTATTCT    5580

TATAACGGTA GGTAACATCT TGTAATTGTA ATAAAGTCAT GATTTCTCCT TCTTAACTAA    5640

TAGATGATAA AATTTCTTTC GGTGATTTTC TAAATAAGAA TAGGAAACAA AGGGCTACAG    5700

ATAAGCAACT AAGCAGAACT AGAAAAACAT AGGATTCTGC AAAAGATAAG ATGCTAGTTG    5760

ATAAACTGCT TGCTTTGGCT AGTGTATCTT GTAAGCTTGC CTGATCTCCA CTTGCTAGTA    5820

GAGTTTGGAG TAGGTAAGTT GTGATTGCGT TTCCTGCAAC AAATGCTGGA AGCAAAGCTC    5880

CAAGAGATAC CAAAACTACC TCTAAACAGA ATTGTAGGAA GATCGAGCTC TTGCCTTTTC    5940

CAAGTGCAAG TAAAATCCCC ACTTCATAGA CCCGTTCTCT CAACCAGAGA GACAAAACCA    6000

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GGAAAGTTGC AACTGAGTCT TTGATTTGTT CAAAAGCCTT GTTTTCCTTT TCGACTTGGT    6120

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CTTCTTTTAG ATTGAAAGCC GAACTGGTAA AGGTTACATC CTTGGATGAA TCCTCAAGAG    6540

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CATACGTGCC GTTCGGCATA CGGCGGTTCA ACTAACTTTT AACGCATGTC GTTCAAGGTA    7080

ATAATCCAAA CACGAAACCA GTCCACGTTT TTCAAGGACT GGTTTTGATA TAGCACGTTT    7140

AAGTACCGAC TTCTGAGCTA CTATAGTAGA TTGAAACTAG AATAGTACAC CTCTACTTCT    7200
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944

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AAAATATTGT TAGAAATCGA TTTGACTGTC CTGAACAATT CGTCCTATTC TTATTTCATT        7260

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CCCTAACTTA AGCAATCCCC ATAATCGTCT CGATTTCTTC TTCCATTGCT TCCAGATAAT        7380

CACTCGTAGG CGAGTACGCA AGCGCTCATC TATGCTAGTG ACTATACTTT TCATATTTAT        7440

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TAAGTGAGTG GTACAGCCAC TACCTCGCAT ATTTTGTCAC ATCATTTAAC GGTACATAAT        7620

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945

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CACGCTCGCT GAGCCCAGCT TCCTCCAGCA AAATCCACTG CTGAGAAGCT AAAGGGAGCG    9120

TGAGATAGCC CTCTTTCTCT ACTGGTTGGT CTGAAATCCG AGCCTCAGGA AACCAGTCTT    9180

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GCCGTCACAT CCTCACGAAA GGCAGCGATG TACTTATCCG CAACCTCCTG AGGCGTGATA    10680

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946

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947

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ACTCCATGCA ATAGAAGTAC GAAAAACATT AAAGCCCATT TCAGAAAACA AGGATATATC      26640

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955

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ATTGCTACCT GTTCACCACA TTCATATTCT CTAGGATATT TATTTTTCAT TAATGCTAAC        28860

AAGTCTTCAT CATCATCGTC GG                                                28882
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(2) INFORMATION FOR SEQ ID NO: 141:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 12835 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 141:

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ACTTGCGGCT AGTTTCCTAG TTTGCTCTTT GATTTTCATT GAGTATTATA TTACTTTCTA        240

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ATGTCTTGCT TACTTTGCTT TTTCTTGCTT TGGTTTATCG TGATGTTTTG ATGACTTATT        360

TCTTTTTTGA TATTCATGCG CCCGATCTAG CTAAATTCGA TGGACAAGCA ATTAAAAATG        420

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957

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CTTTGGATTA ACTTATTTAT CACATTTGCC ATTTTGCCGA TTTTTGGCAA TTAAACAGTC    2640

ATAAAGTCG GAGAGGTTAG CTTGAAAACT AACCTCTTTT TCCTTTTCAA AATGGGGATT    2700
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958

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TGAGTCACAA TTCTACCTAT CTCTTGAAGA TGATTTGATG AAACGTTTTG GTTCTGAACG    4440

CTTGAAGGGA ATCTTTGAAC GCTTGAACAT GTCTGAAGAG GCCATTGAGT CTCGCATGTT    4500
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962

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CAGACAGTCA GGACTTCCAG AGTTCCAAGT GGCTGATATT ATCGAAGATT TTCCGATTTT    10860

AGAAGAAGCA AGAAAGGTTG CTAGCTACAT TAGTTCTATA GAAGCTTGGC AAGAAGATCC    10920

AGAGTGGCGC ATGATTGCCC TTCATCTGGA AAAGAAAGAA CATCTGGATT AAGCTTTCTC    10980

TAAGGAAAAC TTATACTCAA TGAAAATCAA AGAGCAAACT AGGAAGCTAA CCGCAGGTTG    11040

CTCAAAACAC TGTTTTGAGG TTGTGGATGA AACTGACGAA GTCAGCTCAA AACACCGTTT    11100

TGAGGTGGCA GATAGAACTG ACGAAGTCAG TAACATATAT ATACGGTAAG GCGACGCTGA    11160

CGTGGTTTGA AGAGATTTTC GAAGAGTATT AAGCTAGTTT TTAGGTTTGG CTCTTATACT    11220

AGAGTCATCA AAAAGAAACG AGGACTCTCA TATGACAGTA ACGATTAAAG TAAATTACCA    11280

AACCACTTTC CAAAAGAAGG AAGCAAAAAA CTAGTATAAA CAGAAGAGAG AGCGAAATGC    11340

TCTTTTTTCG TTTCTAAAAC TACTTTCAGC CCATCATCCT AAAAGTAAAG AATCTAAATT    11400

CACTTTCTAT TTACCCTTCT TTCTTGCATT GATTACATAG ATATGCTACA GTTGTGGTAA    11460

CGATTACAAA ATAAAAGGAG CATGCTATGA AAAATCCAGC TTTGCTAGAA GAAATTAAGA    11520

CCTATAGAGG AAGGGATGAG GTTCCGGAAG ACTTTGATGA TTTCTGGGAT GGGGAAGTGA    11580
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963

AAAATGTTTC CACGCTTCCA TCCTACCACT TGGAGGAAAG AGATTTCCAC ATTCCTCAAG   11640

TCAAGTGCTA TGAGTTAACA TTTGAAGGAA GCAAGGAAGG AAAGGTCTAT GCACGCATTG   11700

TTCTTCCAAA GAGTGAGGAG AAGGTCCCAT TAATCTTCCA TTTTCATGGT TATATGGGAC   11760

GTGGCTGGGA CTGGGCCGAC ATGCTGGGCT TCACCGTAGC TGGTTACGGT GTTGTTTCCA   11820

TGGATGTGCG GGGCCAGTCA GGTTACTCAC AAGACGGCTT GCGTTCTCCT TTAGGAAATA   11880

CCGTGAAGGG GCATATTATC CGTGGTGCTG TGGAAGGTCG GGACCACCTC TTTTATAAGG   11940

ATGTTTATCT GGATATTTAC CAGTTGGTCG AAATTGTTGC TAGTCTGTCT CAGGTTGATG   12000

AGAAGCGTCT TTCTAGCTAT GGTGCCTCAC AAGGAGGGGC TCTAGCTCTA GTTGCAGCAG   12060

CGCTCAATCC TCGAATTCAG AAAACAGTTG CCATTTATCC CTTCTTGTCA GACTTCAGAC   12120

GGGTGATTGA GATTGGTAAT ACTAGCGAGG CTTACGACGA ACTTTTCCGT TATTTCAAGT   12180

TTCACGACCC CTTCCATGAA ACAGAGGAGG AAATCATGGC GACCCTTGCC TATATCGATG   12240

TCAAAAATCT TGCCCATCGT ATCCAAGGTG AGGTTAAGAT GATTACGGGC TTGGACGACG   12300

ATGTTTGCTA TCCCATTACC CAGTTTGCGA TTTATAATCG TCTGACCTGC GATAAAACCT   12360

ATCGCATCAT GCCTGAGTAT GCTCACGAAG CCATGAATGT ATTTGTCAAT GACCAAGTCT   12420

ACAACTGGCT CTGTGGAAGT GAGATTCCTT TTAAATATCT AAAATAAGGA GTCGACTCTA   12480

AGCACAAAAT CTTAAAAATT ACAAACACGC ATAGTATCAG GGGATTAAGA AAACTTTATA   12540

CTATGCGTTT TATCATGGAA ATATAGTAAA ATGAAATAAG AACAGGACAA ATCGATCAGG   12600

ACAGTCAAAT CGATTTCTAA CAATGTTTTA GAAACAAATG TGTACTATTC TAGTGTCAAT   12660

CTATTATATT TATAGAATTT TTTGTTGCTA GATTTGTCAA ATTGCTTAAA ATAATTTTTT   12720

TCAGAAAGCA AAAGCCGATA CCTATCGAGT AGGGTAGTTC TTGCTATCGT CAGGCTTGTC   12780

TGTAGGTGTT AATACTTTTC AAAAATCTCT TCAAACCACG TCAGCTTCGC CTTGC   12835

(2) INFORMATION FOR SEQ ID NO: 142:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 5020 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 142:

GGGGATATGA AGAACAAAAG AATATTTAAA GACTTCCAAG CTTCAAAAAT GAGTTTAAAC   60

ATTTACACAA GCCCCTTGTT AGCCTTTGTT TTTGTCTTCA TAGGAGAGTT TGTGGCTTTT   120

964

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ACTTTGTATG GTATTGGCTT GTTAGCTCTC ATCGGACTTG CTAGAAATTT TGGAGAGGCT      180

GGTCAAAATC TTGCAAGCTA CTTGCAGACC TTGCATCAGA GCTTGACGGA TAAAACAAGT      240

GACTTTCGTT TAATTTTAGG ATTACTGGCC TTTGGTTATT CTTAACACTG TGTTCAGATG      300

GACAAGAAAA GTTGAGAAAA GACCTATTCG AACCTTGGGA TTTTATAGAG AGAATTTCCT      360

CAGCAATCTT CTGAAAGGAT TTAGTCTAGG CCTGGCACTT TTTCTTCTGA CCTTGTTAGG      420

TTTAGTGGTC TTAGGTCAAT ATCGTTTGGA ATCCATTCAC TTGAATCCTT ATTCTCTTGC      480

CTTTGTCGTC TTTACTATCC CATTTTGGAT TTTACAGGGG ACAGCAGAAG AAGTGGTGGC      540

CCGTGCTTGG CTACTTCCTC AATTGGCCTC AAGAACCAAT CTAAAACTAG CTATTCTTAT      600

ATCTAGCCTG TTCTTTACCC TGCTTCATAT GGGCAATTCT GGTCTCACCC CTCTATCTCT      660

AGTAAATCTC TTTTTATTCG GAGTTGCCAT GGCTCTTTAC CTTCTCAAAA CTGATACAGT      720

TTGGGGTGTT GCAGGTATTC ATGGTGCTTG GAATTTTGCT CAGGGTAATC TCTTTGGGAT      780

TTTAGTTAGT GGTCAACCGT CAGaACGTCT CTGATGACCT TTTTACCACA AGGCAATCAA      840

GATTGGCTAT CAGGTGGTTC TTTTGGCATA GAAGGTTCCA TTATGACAAG TCTGGTATTA      900

CTACTGCTGA TTGTCTATCT TGCTAATAAA TTAAAGAAAG AAAATGAAAG GATGTGACTT      960

CGGTCCGTCC TTTTCTTCGT GAAAATACTA TAAGTATGCT AAAATAGGAA TAGCACATGG     1020

AGAGAGGATT CTTATGATCA ATCACATTAC AGATAATCAA TTTAAACTAG TATCAAAATA     1080

TCAACCATCA GGAGATCAAC CCCAAGCTAT CGAGCAGTTG GTGGATAACA TTGAGGGGGG     1140

AGAAAAAGCT CAGATTCTGA TGGGGGCGAC TGGAACAGGG AAGACCTATA CTATGAGTCA     1200

GGTCATTTCT AAAGTCAATA AACCAACTCT GGTTATTGCC CACAATAAAA CTCTGGCTGG     1260

TCAGCTCTAT GGGGAGTTTA AGGAATTTTT CCCTGAAAAT GCAGTTGAGT ATTTCGTATC     1320

CTACTATGAT TATTACCAGC CAGAGGCCTA TGTCCCTTCT AGCGATACCT ATATTGAGAA     1380

GGATAGTTCT GTCAATGACG AGATTGACAA GCTTCGCCAC TCAGCTACCT CAGCCCTTTT     1440

GGAGCGTAAT GATGTTATTG TCGTGGCCTC AGTCTCTTGT ATCTATGGTT TGGGTTCGCC     1500

CAAGGAATAC GCTGATAGTG TCGTTAGTCT CCGTCCTGGT CTAGAGATTT CTCGTGATAA     1560

ACTCTTGAAT GACTTGGTCG ATATTCAGTT TGAACGTAAT GATATTGATT TCCAACGCGG     1620

AAGATTTCGC GTTCGTGGGG ATGTGGTAGA GATTTTCCCA GCTTCCCGAG ATGAACATGC     1680

CTTTCGAGTA GAATTTTTTG GAGACGAAAT TGACCGTATT CGTGAAGTTG AGGCTCTGAC     1740

AGGTCAGGTG TTGGGAGAAG TGGATCATTT AGCGATTTTC CCAGCGACAC ACTTTGTGAC     1800

CAATGACGAC CACATGGAAG TTGCCATTGC AAAGATTCAG GCCGAGTTGG AAGAACAATT     1860

AGCTGTCTTT GAAAAGGAAG GTAAACTGCT TGAAGCCCAG CGTTTGAAAC AGCGGACAGA     1920
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965

GTATGATATC GAAATGTTGC GTGAGATGGG CTATACCAAT GGGGTTGAAA ATTATTCTCG   1980

CCACATGGAT GGACGGAGCG AAGGAGAGCC TCCTTATACG CTTCTCGACT TCTTCCCAGA   2040

TGATTTCTTG ATTATGATTG ACGAGAGTCA TATGACCATA GGGCAAATCA AGGGCATGTA   2100

CAATGGAGAC CGTTCGCGTA AAGAAATGCT GGTTAATTAT GGTTTCCGTT TGCCGTCTGC   2160

TTTGGACAAT CGTCCTCTCC GTCGGGAGGA GTTTGAGAGT CACGTTCATC AGATTGTTTA   2220

CGTTTCAGCG ACACCTGGTG ACTATGAAAA TGAACAGACC GAGACAGTGA TTGAGCAAAT   2280

CATTCGTCCA ACGGGACTCT TGGATCCAGA GGTGGAAGTC CGTCCGACTA TGGGACAGAT   2340

TGATGACCTC TTGGGTGAAA TCAATGCCCG CGTTGAAAAA AATGAGCGTA CCTTTATCAC   2400

AACTTTGACC AAGAAAATGG CAGAGGATTT GACCGACTAC TTCAAGGAAA TGGGTATCAA   2460

GGTCAAGTAC ATGCACTCGG ATATCAAGAC CTTGGAACGG ACGGAGATTA TCCGTGACCT   2520

GCGCTTGGGT GTCTTTGATG TCTTGGTCGG AATTAACCTG CTCCGTGAAG GAATTGACGT   2580

TCCTGAAGTG AGCCTCGTAG CTATTCTCGA TGCTGACAAG GAAGGTTTCC TTCGCAACGA   2640

ACGTGGACTC ATCCAGACCA TTGGACGTGC TGCACGTAAT AGCGAAGGTC ATGTTATCAT   2700

GTATGCGGAC ACGGTTACCC AGTCTATGCA ACGTGCTATC GATGAAACTG CCCGCCGTCG   2760

CAAAATCCAG ATGGCCTATA ATGAAGAACA TGGTATCGTT CCACAAACCA TCAAGAAAGA   2820

AATCCGTGAC TTGATTGCTG TGACCAAGGC AGTTGCTAAG GAAGAAGACA AGGAAGTCGA   2880

TATCAATAGC CTCAACAAAC AAGAGCGCAA AGAACTAGTC AAAAAGCTTG AGAAACAAAT   2940

GCAAGAAGCA GTTGAAGTGC TTGACTTTGA ACTAGCAGCT CAGATTCGTG ATATGATGCT   3000

GGAAGTCAAG GCCTTGGATT AGGGGAATAG TATGATTTAT TTAAGAAAGT TAAAGAAAGA   3060

AGATTTGATG TCTTTATGGG AAATGGCTTA TTCACAGCTT AATCCAGTTT GGAAACAGTA   3120

TGATGCTCCC TATTATGATG ATTATCAGTA TTTTTCAAAT TTTAAAGAAT TCGAACTACA   3180

AAAATCAGAA TCCATTTTAA GCAACTCAAA TCGCCTTGGT ATTTTTGTTG ATGATAAACT   3240

AGTTGGGACT GTTTCGCGTT ATTGGGTATG TAAAGAAACA AGATGGATGG AATTGGGAAT   3300

TGGTATTTAT GATAAAAAAT TCTGGAACAC TGGTATTGGG AAAGTTGCTA TGTTGCAGTG   3360

GATAGATAGG ACGTTTCAGG ATTACTTGGA GTTGGAGCAT CTGGGTTTGA CAACTTGGTC   3420

AGGAAATATT GGTATGATGA AACTTGCTGA AAAATTAAGA ATGAAAAAAG AAGCTCATAT   3480

TCCAAAAGTT CGTTATTATC AAGGTAAATA TTTTGACAGT ATTAAATATG GTATTTTGAG   3540

AGAAGACTGG GAGAAAATAA ATGACGGTTA TTATCAAATC AATGGAAACT CCTGAAGAGA   3600

TAGAAGGTAA ATCCTTCGTT CACTGGCAAA CGTGGAGAGA GGCTTATGAT GACCTTTTGC   3660

966

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CTGCGGAATT TCAGGAGACA ATGACATTAG AAAGATGTCG ACTCTTTAGT CAAAAGTATC        3720

CAGAAAATAC ATTGATTGCG ATGGATGGTG TGAAGATAGT TGGTTTTATA AGTTATGGCA        3780

ACTGTCGTGA TGAGACTATT CAAGCTGGTG AAATTATTGC TTTATATGTT TTAAAAGACT        3840

ATTATGGAAA AGGAATCGCA CAAAAGTTAG TGAAAGCAGC TTTGACTGAT CTTAATCATT        3900

TTTCTGAAAT TTTCTTATGG GTATTGAAAG ATAACAAGCG CGCCATTGCT TTCTATCAAA        3960

AAATGGGTTT TACTTTTGAT GGACAAGAAA AAATACTTGA ACTTGGAAAG CCTATAAAGG        4020

AAAAACGGAT GGTATTCTAT TCTAAATAAT TCTCAAAAGT AAAAGCTAAT ATGGTACCAA        4080

GTCTGAAAAT TTAATAAATT AGAAAGCGAG TAAATTTATG TCCCGTTCCC AATTAACAAT        4140

TTTAACAAAT ATCTGTCTGA TTGAAGACCT CGAAACTCAG CGCGTGGTGA TGCAGTATCG        4200

CGCCCCTGAA AACAATCGCT GGTCTGGTTA TGCCTTTCCT GGAGGTCATG TAGAAAATGA        4260

TGAGGCTTTT GCGGAGTCTG TCATTCGTGA AATCTACGAA GAAACAGGGT TGACTATCCA        4320

AAATCCTCAA CTTGTCGGCA TTAAAAATTG GCCACTAGAT ACAGGTGGGC GCTATATTGT        4380

CATTTGTTAT AAGGCGACTG AGTTCTCTGG TACCCTTCAA TCTTCAGAAG AGGGAGAAGT        4440

TTCTTGGGTG CAAAAAGACC AGATTCCAAA CTTAAATCTG GCCTATGATA TGCTACCATT        4500

GATGGAAATG ATGGAAGCTC CCGACAAGTC AGAGTTTTTC TACCCTCGCC GTACAGAAGA        4560

CGATTGGGAA AAGAAAATCT TCTAGTCTTT TACTAAATAA CCTAGCTGAT CCAAGGCCTC        4620

CTCGATATAG TGGAGGTCTT GTTGTGTCTC GGCTTCAACT AGGTGATAAT GAATACCATC        4680

TGTTAACTCA GAAATTGGCT TAAAGTCAGA ACGTTCAACT TGTTCTAGAA AATGTTGCAC        4740

GTCGCGGCGA CAGGTCAGTT TTAGTAAGGT TTCAATCTCT CCATAAACAG GATGATCAAT        4800

CAAGATATTT TGAACGCGAC CACCATTATC TACGATAGCA AGTAATTCTC GTCCAATTTC        4860

TTCAACTTCA TGCTTGACCT TAAATAATTT GTGATGATAA GTATTTGCAT TAGCATCTTT        4920

ATAGATATAA CCACGATTGG TAGATAGAAT TGGAGATCCA TCAGCTCTTA AAATTGCAAT        4980

ATCTTGAACA ATAACTTGTC GAGTGACATG AAAGTGCTCA                              5020
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(2) INFORMATION FOR SEQ ID NO: 143:

       (i) SEQUENCE CHARACTERISTICS:
           (A) LENGTH: 4965 base pairs
           (B) TYPE: nucleic acid
           (C) STRANDEDNESS: double
           (D) TOPOLOGY: linear

       (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 143:

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AAAAAGTGGC AATCCATTGA TTGGCCACTT CATTTAGAGA ATTATCGTCT CGCCCTTGAA        60
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967

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GAAGAAGGTC GTGTAGTACT TGAGTTACTG CTATCGCTAG AACTACTACT TGAACTGCTG          120

GAGCTGGATG GAGTTGGTAG ACTCCCCACA ATACTAGACC AAGCATTCTG ATAATCCGCA          180

TCACTTCCGC CAATAGCAAA GCGATAACTT GTCGCTGGCG CTCCTGACTT ATTAGCCCAA          240

TAGCTGGTAA CAGTCGAACC TGTGACCTCT ACTTCTTTTC CTTCAACAGA AACCTTCTCT          300

GGTTTTTGAC CTGTTGATTT CAAGACTTCC GATTTCACTA CACTAGGATC TAAAGCAAAG          360

CGCTCGTTCC CCCAAATGCT TGGGGAAGCT TGCTGAATCG CATTTACCAG ATGAGCCATG          420

TAATTAGAGT TATTAGAATA ACCTGCTCTA CGTGACAATG AATGATTATC ATCATGCCCA          480

ATCCAGCCAC CTAGGGTTAA TCTAGGTGTC GAAAGCATGA GCCACATATT TTCGTCTTGG          540

TTGGTTGTAC CAGTCTTCCC AATCCAATCT GCATTAGCCA GAGTAGGATT TAAAGAAGTC          600

AGGTTAGACT TGAAGGTTGT TGTCACACGA GAGGATAGAA CTTCTCGTAG CAATCCCTGC          660

ATAATCGTCG CAGTAGCTTT TGAATAGACT TGAACCGGTT TATCCTGATA CTCATACACC          720

ACTCTACCAT CTGCTGCTTC AATCTTTGAA ATCACATGCT TCTGATGATA AACTCCATTA          780

TTAGCTAAGG TCTGATAGCC ATTGGTATGC TGGGCAACTG TGACTTCAAT ACCACCACCC          840

ATTGGCAAGC TCTCAATACC GTACTCAGGA ATCTCGTAAC CCATCTTTTC CATATAACCC          900

TTGACATCAA CACCCTTTTC ACGGAGCATA CGATAGGTCC AGTAAGCAGG GATATTCCAT          960

GAATAGTTCA GAGCTTCTCC CAAGGTCATC ATTCCTGTTC CCTTGCTATT AGCATACATA         1020

ATCGGATTGC CATTAGCAAA GTTTGTTGGA TAGTTAGATA GAATCGTTTC ACTTCCCATC         1080

AAGCCCTGGT CAATAGCAAT ACCGTAGGCC AGCAAGGGCT TGGTAGTAGA AGCTGGCGAA         1140

CGTTTGGTAT CAAAGGCATG ATTATTTTGA TTTTCTTGAT AATTACGACC ACCTACAAAG         1200

CCTAGAATAG CACCTGTTTG GTTATCCATC AAGACATTCC CTACTTCTAC ACGACCTGTT         1260

CCATCGTCTA AAAGATAGCC ATAATCAGCA ACCGCACTTT GCATGGCAGA ATGAATTTTC         1320

TGATCTATGG TAGTAGTAAT CTTATAACCA CCATTTTCAA TTTCCTTGGC TGCCAAATCT         1380

CGATAAAACT TCTGAGTTGC CTCATTTTTC AACTCCTTAG CGGAGACATT GTCTCTCTGA         1440

GCTAGATAGT CATACATACG TTCTTGAGCT TCTGCCAAAG TTGTAAAGTA TAAATAGTCT         1500

CGTGAAATTC CTGTAACCGT GCCCGATGGT AAAAAGTCCT GTTTAAGGTC ATAATCCTTG         1560

TACTGAGAAT ACTCGTCTTT GCTTAATGCA CCTGTACGAT ACATACTGTA AAGAACTGCC         1620

TTAGCCCGTC TTAAGCCAAT TTCTAGGTCT TCATCACTCT TCAACTCCCC AGTATTTTCA         1680

TAAGGAGAGT AAGTAATGGG ACTCTGTGGA AGTCCTGCTA AAAATGCTGC TTGAGGAACA         1740

GTCAACTGAC TGGCATCTAC ACCGAAAATT CCCTCAGCTG CTTGCCGAGC CCCTGCAATA         1800
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968

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TTCTGTCCCT TATTATTTCG GCCAAAGGGA GCCACATTGA GATAGGTCGT TAAAATCTCA      1860

TCTTTATTCA TGGCGCGTTC CAAGGCAAGA GCATCCACAA TCTCTGCCGC CTTACGAGCC      1920

AAGGTCGGCG CATCCCCAAC CACCTGCTGT TTAATTAGTT GCTGGGTCAA GGTTGAACCC      1980

CCACTAGAGG AACCCAAACC TACAAATTTC CCCAAGGTCG CACGAATCAC CGCCTTGGGT      2040

ACTACACCCT TATGTTCTTT AAAGTGTTCA TCTTCTGTCG CAATGATAGC CTTCTTCAGA      2100

TTTTCCGAAA TTTGCTCAGA TGAGATAGAA GTGCGCAACA AATCACTCTC TATGGAAGCA      2160

ATCACCGTCC CGTCCGAATA GGTAATCTCT GAAATAGAAG AGATGTCCTT GACCTGATTC      2220

ACCAATTCTT CTGTCTGAGG CACCCGAACC TTGTCAAATA AGGCCACTCC GTATCCCAAA      2280

GCAATCCCAG CTCCCAACAT TCCTCCTAGA AAACCGAGTA CAAAGAGTAA GTTAAATAAG      2340

GCTTTTATAC TCAGTAAAAT AGCTGGGAAA ATGACTGACT TATCTAAGGT TTTAGATTTT      2400

TTGGTACTTG AACCTTTCTT GCCAGGTCTA GCTGATTTTT TATTTTTTTG TTTTTGCTGG      2460

AAAAATTCCA GCATTTTTCG TTTTAATTCA TTTAATTGAT TTTGCATGGA TTTCCTCACT      2520

TTATCTATTA TACCACAAAA GGGAAATTTT CAATAAAATA GCCACTTTCT TCCCTATTCT      2580

GCTAGGCTAT TGCCCAAGTT TGTGATACAA TAGGTAGAAA CAATAATTTT AAAAAGGAGA      2640

AAAAACACAT GCACATTTTT GATGAGCTAA AAGAGCGTGG TTTGATATTT CAAACGACTG      2700

ATGAAGAAGC TTTGCGTAAA GCCCTAGAAG AAGGTCAAGT TTCTTATTAT ACTGGCTACG      2760

ATCCAACTGC TGACAGCCTT CACCTAGGCC ACCTTGTCGC AATCTTGACA AGTCGTCGCT      2820

TGCAACTAGC AGGTCACAAA CCTTATGCGC TCGTTGGCGG TGCTACAGGT CTCATCGGAG      2880

ATCCGTCCTT CAAAGATGCT GAACGTAGTC TCCAAACAAA AGACACAGTA GATGGCTGGG      2940

TCAAGTCTAT CCAAGGACAA CTTTCTCGTT TTCTTGACTT TGAAAATGGC GAAAACAAGG      3000

CTGTCATGGT CAACAACTAC GACTGGTTTG GCAGCATCAG CTTCATTGAC TTCCTCCGTG      3060

ATATTGGAAA ATACTTCACG GTCAACTACA TGATGAGTAA GGAATCTGTT AAAAAACGGA      3120

TCGAAACAGG AATTTCTTAC ACTGAGTTCG CTTACCAAAT CATGCAAGGG TATGACTTCT      3180

TCGTCCTTAA CCAAGACCAT AATGTCACTC TTCAAATCGG TGGTTCTGAC CAGTGGGGAA      3240

ATATGACAGC TGGTACCGAA TTGCTTCGTC GTAAGGCGGA CAAGACTGGT CACGTTATCA      3300

CTGTTCCACT AATCACAGAT GCAACTGGTA AGAAATTTGG TAAATCAGAA GGAAATGCCG      3360

TCTGGCTCAA TCCCGAAAAG ACTTCTCCAT ACGAAATGTA CCAATTCTGG ATGAACGTGA      3420

TGGACGCTGA CGCTGTTCGC TTCTTGAAAA TCTTTACTTT CTTGTCACTT GATGAGATTG      3480

AAGATATTCG TAAACAATTT GAAGCAGCGC CACACGAACG CTTGGCTCAA AAAGTCTTGG      3540

CTCGTGAAGT TGTTACACTT GTTCACGGAG AAGAAGCCTA CAAAGAAGCA CTTAACATCA      3600
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969

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CTGAGCAACT CTTTGCAGGA AACATCAAAA ACCTTTCTGT CAAAGAGCTC AAACAAGGAC     3660

TTCGTGGTGT GCCCAACTAC CAAGTACAGG CAGACGAAAA CAACAATATC GTGGAACTGC     3720

TCGTCTCATC TGGTATAGTT AACTCAAAAC GCCAAGCCCG TGAAGACGTC CAAAACGGAG     3780

CCATCTACGT AAACGGCGAC CGCATCCAAG AGCTTGACTA TGTCTTGAGT GACGCTGATA     3840

AGTTAGAGAA TGAACTGACT GTTATCCGTC GTGGGAAGAA AAAATACTTT GTATTGACTT     3900

ACTAAACTAT TCAACATTTA TCTATAAACA AAGGAGTTAA CCTCGAGAAA GGTAACTCCT     3960

TTTTGCTGTT AATAACTCTC ATCTATCTAT TTTTAATAGA CAGGCTACGC AGGACAATGC     4020

GCAAGGTTGT TAGATTATGT AAGATAGAGA GATTTGAAGG ACTGAACCAA TTAAATAAGC     4080

CAAAGCCAAT CAAACTACTA TTTACGACAA CGGTATCCTG AATATTTTTC TTGATGAGTG     4140

TTTGCAAAGA TGATGATAAC GAATCCAACT CTTGGAAGAA ATCCAAACGA TTATCTAACA     4200

ATAAGATATC ACTCATCTGC TTAGAAATAT CTGCACTCTC ATTCATCACC ACACCGATAT     4260

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CTGCTTTCTG CAGTTTCTCT ACTAACTCAA ATTTCCCATC AGGTTTCAAG TCTGTATAGA     4380

CCTGATCAAA GGGCAAATCT TTGACTAATT CCTCTGTCCT AATCAAGGTG TCTCCTGTTG     4440

CCAGAATCAA TTTTTTCCCC TGTGCCTTAA GTTTATCCAA GGCTGTTTTT GCTTCTTTTC     4500

TCAAAGGAGT ATGAATGCAG AACATTCCAA TCAATTCATT TTGATAAGCC AAGAATAAGA     4560

GATTGTAGTG ACTCTTGTAC TCTTCAATTA AAGCATTTTG TTCTGAACTG ATATGAATCT     4620

GCTCATCCTG CATCAAGACA TAATTCCCAA TAAGAACTGG TTGGCCATCT ATATGAGATT     4680

TGATCCCCTT GCTTGCGATA TATTGGAGTT TCCCATGCAT TTCCTCATGT TCAATTCCCT     4740

CTATCTCAGC TTGCTTGACG ATGGCATTAG CAATAGGATG ATAAATGTGT TCCTCAAGAC     4800

AGGCACTGAT TCTGAGAATA TCTTCCTCAC TATAGTCTCC AAAAGGTAAC ACCTTTTCAA     4860

CTATAGGATA ACTAGTTGTG ATTGTTCCTG TCTTATCAAA CAAGAAAGTA TCAACTTCCA     4920

GATATTTCTC CCTGTTGTGG CCTCTGGCTG TCATCTCTGT GCTGG               4965
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(2) INFORMATION FOR SEQ ID NO: 144:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3232 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 144:

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                                         970
CAGGGGCGTA TTACGTGACA ATTCAATGTA GGCTGTCGCT ACTTGCGCCA AAACAAGGAT       60

TCGATAATGT CGGATGATAC TAACGATTAA ACCGAGCAGA AAGGATCCCA AAATTCCCCA      120

AACTGCAATA TGCAAGGTCA GAAAGAATGC CTTTTGATAT AGTGGTAGAT ATTGTTCAAC      180

AATGGATCAA TCCAAAAATA GAACCTCCCA TCTAGAAATA ATACAGTTAT TGTAGCACTT      240

AAAATCTTCT TTGGATAATA TCTATTTTTT ATTGCCGTTA TAAGGATTTT TATCATAGAC      300

ATAAAATTTC TGAAATTTCC AAACAAAATA TTTTAAAAGT TTTGAAAAAG AGTTAAGATA      360

TTTTTGTAAT ACACAAAGTA AACGCTTACT TATTAAGGAG GACATTTTAT GTCATACAAA      420

ACAAGCAATG CAGAAGGTCA TGTAGATTTC ATCAATACCT ATGATTTGGA GCCAATGGCG      480

CAACAAGTTA TTCCTAAAGC AGCATTTGGC TATATCGCTA GTGGGGCGGG AGATACTTTC      540

ACTTCTTTCC AGTGATTTTA GCGTCAGGTT CTTTTTAGTT TTTAAAGATT ATCCGTGAAT      600

TTCTTGCTTA TTTATGATAA AATGGGAGTG TCGCAAAAAA TGACTCATCG TATTCAATTT      660

TGAGTAAAAC TAGGAGGATC CCATGTCTAC AGAACATATG GAAGAACTAA ATGACCAGCA      720

GATCGTTCGC CGTGAAAAAA TGGCTGCGCT CCGCGAACAA GGAATCGATC CTTTCGGAAA      780

ACGTTTTGAA CGTACTGCAA ATTCACAAGA ATTAAAAGAT AAATATGCCA ACCTCGATAA      840

AGAACAATTA CACGATAAAA ACGAAACAGC TACTATCGCA GGACGCTTGA TAACCAAACG      900

TGGTAAAGGA AAAGTTGGTT TTGCCCACCT TCAAGACCGC GAAGGCCAGA TTCAGATCTA      960

CGTTCGTAAG GATGCTGTCG GTGAAGAAA CTACGAAATC TTCAAAAAAG CAGACCTTGG     1020

TGACTTCCTT GGTGTCGAAG GTGAAGTGAT GCGTACGGAT ATGGGAGAAC TCTCTATCAA     1080

GGCAACCCAC ATCACACACT TGTCTAAGGC TCTTCGTCCT CTTCCTGAGA AATTCCATGG     1140

TTTGACAGAC GTTGAAACAA TTTACCGTAA ACGTTACCTT GACTTGATTT CTAATCGTGA     1200

AAGCTTTGAA CGCTTTGTCA CTCGTTCAAA AATCATCTCT GAAATCCGTC GTTACCTTGA     1260

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TGCCCGTCCA TTTATCACCC ACCACAATGC CCAAAACATT GACATGGTGC TTCGTATCGC     1380

GACTGAGCTT CACTTAAAAC GCCTTATCGT GGGTGGTATG GAACGTGTCT ATGAAATTGG     1440

CCGTATCTTC CGTAACGAAG GAATGGACGC TACTCATAAC CCTGAGTTCA CTTCTATCGA     1500

AGTTTACCAA GCTTATGCAG ACTTCCAAGA CATCATGGAC TTGACTGAAG GCATTATCCA     1560

ACACGCTGCT AAATCAGTCA AAGGTGATGG CCCAGTCAAC TACCAAGGTA CTGAAATCAA     1620

GATTAACGAA CCATTTAAGC GTGTTCATAT GGTGGATGCT ATCAGAGAAA TTACTGGTGT     1680

CGATTCTGG CAAGACATGA CTTTGGAAGA AGCTAAAGCT ATCGCTGCTG AGAAGAAAGT     1740

TCCAGTTGAG AAACACTACA CTGAGGTTGG TCACATCATC AATGCCTTCT TTGAAGAGTT     1800
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971

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TGTTGAAGAA ACTTTAATCC AACCAACCTT TGTCTATGGA CATCCAGTAG CTGTATCTCC     1860

ACTCGCTAAG AAAAATCCTG AAGACCAACG CTTTACTGAC CGTTTCGAGC TCTTTATCAT     1920

GACTAAGGAG TACGGTAATG CCTTTACTGA GTTGAACGAC CCAATCGACC AACTTAGCCG     1980

TTTTGAAGCC CAAGCTAAAG CCAAAGAACT TGGTGATGAT GAAGCGACAG GAATCGACTA     2040

TGACTACATT GAAGCTCTTG AATACGGTAT GCCACCAACA GGTGGTTTGG GAATCGGTAT     2100

CGACCGTCTC TGCATGCTCC TCACTGATAC AACAACTATC CGTGATGTAT TGCTCTTCCC     2160

AACAATGAAA TAAATTCTTA TCCTCTGGGT CTTATCAGAG GATTTTTTGA TTCAAAAAGA     2220

GACTGAATTT AAGGAGAAAA TGAAGTGTAG TATATTGAAA TTGAAATAGT ACACTTTGAT     2280

TTCTAAGACA TTGTTAGAAA TTGGTTTAAA TTCCCTAAGC AATTTGTGCA TGTTTTATTT     2340

CATTTTACGA TAGTACGCTG AAACTTTTCA AAAAGTACTA GAAATTGACT TGGATTCCCC     2400

AATTGATTTG TTCAGATTCA CTATAAATAA AAAATTAATA AGTGGGATAG GAAGTTAGCG     2460

TCAACTAGGA TAGTATCTTG CTTAAACAGT ATATATGGGA TTGATATAAG TCCATAGGTC     2520

CTATTAGAGG ATGTTCTGGT GTCTTATTCA CTTGTTTTTT ATAGTATTAG TAGATAGAAT     2580

CAGCAAATAA AAACCCAAAT CATTCATACC TCTCTCAACT AGATGTAACT TACAAAACCC     2640

CTGACCTCAT GAGCCACTTT CTTCCTCCTC ATGAGGTCAG TTTTACTTTC TGCTGTTCCA     2700

GTATCGTTTT TCCTCGCTAG ATTTCCTCAA AAGGGCAGAC TCCTCCCTTG GTGCGTCACA     2760

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TTCATAAGGA ACAGGAAGAT TCAGGTTGAC TTTTCTAATC CTAGAATAAA GTGCTGAAAA     2880

CAATTCGGAA TAGGCATAGA GACTAGACAA TTTGAGGAGC TGCTTGCGTC CTGTTCGAAC     2940

ACATTTTCCC ACCACGTGAA GAAAAAGATG GCGGAAGCGT TTGATTGTTA AAGTTTGGAA     3000

GTCACCTCCA GCTAGATGTT TGAGAAAAAG ATAGAGATTG TAGGCGATAC AGCTCATCAT     3060

CATACGAACT TCGTTTTTGA TTAAGGTTGA ACTATCCGTT TTATCGCCAA AAAATCCCTC     3120

CTTCATCTCC TTGATGAAAT TCTCGGCTTG ACCACGTCCA CGATAAAGCT GAAACTGGTC     3180

TTGGCTTGTT CCACTCGTCA TATTTGTAAC GAGAGAAATA ACATCGTAGA AC             3232
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(2) INFORMATION FOR SEQ ID NO: 145:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 10711 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

972
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 145:

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CCGGAGAAAA TGATGAAAAG TTCAAAACTA TTTGCCCTTG CGGGCGTGAC ATTATTGGCG        60

GCGACTACTT TAGCTGCATG CTCTGGATCA GGTTCAAGCA CTAAAGGTGA GAAGACATTC       120

TCATACATTT ATGAGACAGA CCCTGATAAC CTCAACTATT TGACAACTGC TAAGGCTGCG       180

ACACAAATAT TACCAGTAAC GTGGTTGATG GTTTGCTAGA AAATGATCGC TACGGGAACT       240

TTGTGCCGTC TATGGCTGAG GATTGGTCTG TATCCAAGGA TGGATTGACT TACACTTATA       300

CTATCCGTAA GGATGCAAAA TGGTATACTT CTGAAGGTGA AGAATACGCG GCAGTCAAAG       360

CTCAAGACTT TGTAACAGGA TTAAAATATG CTGCTGATAA AAAATCAGAT GCTCTTTACC       420

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CACAAGTAGG AATTAAGGCT CTGGATGAAC AGACAGTTCA GTACACTTTG AACAAACCAG       540

AAAGCTTCTG GAATTCTAAG ACAACCATGG GTGTGCTTGC GCCAGTTAAT GAAGAGTTTT       600

TGAATTCAAA AGGAGATGAT TTTGCCAAAG CTACGGATCC AAGTAGTCTC TTGTATAACG       660

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ATCCAACAAG TGCAAGTTTC GCAGAACTTG AGAAGAGTAT GAAGGACAAT ATTGTCTATA       900

CTCAACAAGA CTCTATTACG TATCTAGTTG GTACAAATAT TGACCGTCAG TCCTATAAAT       960

ACACATCTAA GACCAGCGAC GAACAAAAGG CATCGACTAA AAAGGCTCTC TTAAACAAGG      1020

ATTTCCGTCA GGCTATTGCC TTTGGATTTG ACCGTACAGC CTATGCCTCT CAGTTGAATG      1080

GACAAACTGG AGCAAGTAAA ATCTTGCGTA ATCTCTTTGT GCCACCAACA TTTGTTCAAG      1140

CAGATGGTAA AAACTTTGGC GATATGGTCA AAGAGAAATT GGTCACTTAT GGGGATGAAT      1200

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ATGAGACTAC AGATGTTGCT AAACGCTATG ATAAATACGC TGCAGCCCAA GCTTGGTTGA      1740
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973

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TGTATAAATA CTTGGAACTT CAAGACAAGG CAGTCACTGT AGATGAATAC CAAAAAGCTC    1920

AGGAAAAATG GATGAAAGAA AAAGAAGAGT CTAATAAAAA GGCTCAAGAA GATCTCGCAA    1980

AACATGTGAA ATAACTGTTG CAAAATATAA GAAAGGATTT AGTATTTCCC TTGAATGCTG    2040

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CCTCTTTTTG TCAGAATAGA GAAAATTTTT GTTAATTTTA CTTGTTTCCT ATTGCTTTCT    2160

CAGCTATTAT TTGTTATATT AAAAGTATAA TTATTTTTTA TTTATCAGAG TTAAGCATTG    2220

CACTTTCAGA GGAAGGAGTA TTTTTTAAAA AGAAAATGTA AACGTTTGCT CAAAAATGAA    2280

AGGATTTAGA AGTTTATGAA TAAAGGATTA TTTGAAAAAC GTTGTAAATA TAGTATTCGG    2340

AAATTTTCAT TAGGTGTTGC TTCTGTTATG ATTGGAGCTG CATTCTTTGG GACAAGTCCG    2400

GTTCTTGCAG ATAGCGTGCA GTCTGGTTCC ACGGCGAACT TACCAGCTGA TTTAGCTACT    2460

GCTCTTGCAA CAGCAAAAGA GAATGATGGG CGTGATTTTG AAGCGCCTAA GGTGGGAGAA    2520

GACCAAGGTT CTCCAGAAGT TACAGATGGA CCTAAGACAG AAGAAGAACT ATTAGCACTT    2580

GAAAAAGAAA AACCGGCTGA AGAAAAACCA AAAGAGGATA AACCTGCAGC TGCTAAACCT    2640

GAAACACCTA AGACGGTAAC CCCTGAATGG CAAACGGTAG CGAATAAAGA GCAACAGGGA    2700

ACAGTCACTA TCCGAGAAGA AAAAGGTGTC CGCTACAACC AACTATCCTC AACTGCTCAA    2760

AATGATAACG CAGGCAAACC AGCCCTGTTT GAAAAGAAGG GCTTGACCGT TGATGCCAAT    2820

GGAAATGCAA CTGTTGATTT AACCTTCAAA GATGATTCTG AAAAGGGCAA ATCACGCTTT    2880

GGTGTCTTTT TGAAATTTAA AGATACCAAG AATAATGTTT TTGTCGGTTA TGACAAGGAT    2940

GGCTGGTTCT GGGAGTATAA ATCTCCAACA ACTAGCACTT GGTATAGAGG TAGTCGTGTT    3000

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CTAAATGCCA GCAATAATGA TGTCAATCTC TTTGACACAG TGACTCTACC AGCTGCGGTC    3120

AATGACCATC TTAAAAATGA GAAGAAGATT CTTCTCAAGG CGGGCTCTTA TGACGATGAG    3180

CGAACAGTTG TTAGCGTTAA AACGGATAAC CAAGAGGGGG TAAAAACAGA GGATACCCCT    3240

GCTGAAAAAG AAACAGGTCC TGAAGTTGAT GATAGCAAGG TGACTTATGA CACGATTCAG    3300

TCTAAGGTCC TCAAAGCAGT GATTGACCAA GCCTTCCCTC GTGTCAAGGA ATACAGCTTG    3360

AACGGGCATA CTTTGCCAGG ACAGGTGCAA CAGTTCAACC AAGTCTTTAT CAATAACCAC    3420

CGAATCACCC CTGAAGTCAC TTATAAGAAA ATCAATGAGA CAACAGCAGA GTACTTGATG    3480
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974

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AAGCTTCGCG ATGATGCTCA CTTAATCAAT GCGGAAATGA CAGTACGCTT GCAAGTTGTA        3540

GACAATCAAT TGCACTTTGA TGTGACTAAG ATTGTCAACC ACAATCAAGT CACTCCAGGT        3600

CAAAAGATTG ATGACGAAAG CAAACTACTT TCTTCTATTA GTTTCCTCGG CAATGCTTTA        3660

GTCTCTGTTT CTAGTAATCA AACTGGTGCT AAGTTTGATG GGGCAACCAT GTCAAACAAT        3720

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GGTTACATGT ATGGATTTGT TTCTACAGAT AAGCTTGCTG CTGGTGTTTG GAGTAACTCT        3840

CAAAACAGCT ATGGTGGTGG TTCGAATGAC TGGACTCGTT TGACAGCTTA TAAAGAAACA        3900

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AAGGGCATTG TTTTCCCAGA ATACACGAAG GAACTTCCAA GTGCTAAGGT TGTTATCACT        4020

GAAGATGCCA ATGCAGACAA GAACGTTGAT TGGCAAGATG GTGCCATTGC TTATCGTAGC        4080

ATTATGAACA ATCCTCAAGG TTGGGAAAAA GTTAAGGATA TCACAGCTTA CCGTATCGCG        4140

ATGAACTTTG GTTCTCAAGC ACAAAACCCA TTCCTTATGA CCTTGGATGG TATCAAGAAA        4200

ATCAATCTCC ATACAGATGG TCTTGGGCAA GGTGTTCTCC TTAAAGGATA TGGTAGCGAA        4260

GGCCATGACT CTGGTCACTT GAACTATGCT GATATTGGTA AGCGTATCGG TGGTGTCGAA        4320

GACTTCAAGA CCCTAATTGA GAAGGCTAAG AAATATGGAG CTCATCTAGG TATCCACGTT        4380

AACGCTTCAG AAACTTATCC TGAGTCTAAA TACTTCAATG AAAAAAATTCT CCGTAAGAAT        4440

CCAGATGGAA GCTATAGCTA TGGTTGGAAC TGGCTAGATC AAGGTATCAA CATTGATGCT        4500

GCCTATGACC TAGCTCATGG TCGTTTGGCA CGTTGGGAAG ATTTGAAGAA AAAACTTGGT        4560

GACGGTCTCG ACTTTATCTA TGTGGACGTT TGGGGTAATG GTCAATCAGG TGATAACGGT        4620

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AAGTCAAATG ATGTCAATAG TCCACAATAT CGCGAACGTA CAGTAACGCT CAACGGACGT        5160

GTCATCCAAG ATGGTTCAGC TTACTTGACT CCTTGGAACT GGGATGCAAA TGGTAAGAAA        5220

CTTTCTACTG ATAAGGAAAA GATGTACTAC TTCAATACGC AGGCCGGTGC AACAACTTGG        5280
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975

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ACCCTTCCAA GCGATTGGGC AAAGAGCAAG GTTTACCTTT ACAAGCTAAC TGACCAAGGT    5340

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GGCATGCACA TCTATGACCA AGGATTTAAT AGCGGTACCT TGAAACATTG GACCATTTCA    5520

GGCGATGCTT CTAAGGCAGA AATTGTCAAG TCTCAAGGGG CAAACGATAT GCTTCGTATT    5580

CAAGGAAACA AAGAAAAAGT TAGTCTCACT CAGAAATTAA CTGGCTTGAA ACCAAATACC    5640

AAGTATGCCG TTTATGTTGG TGTAGATAAC CGTAGTAATG CCAAGGCAAG TATCACTGTG    5700

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TCAAGCATGT ACGGAGACAA GCATGATACA GGTAAAGGCA CCTTCAAGCA AGACTTTGAA    6000

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CGCACTCACT TGTCTGAAAA ACACAATCCA TATACACAAC GTGGTTGGAA TGGTAAGAAA    6120

GTCGATGATG TTATCGAAGG AAAATTGGTCA CTCAAGACAA ATGGACTAGT GAGCCGTCGT    6180

AACTTGGTTT ACCAAACCAT CCCACAAAAC TTCCGTTTTG AAGCAGGTAA GACCTACCGT    6240

GTAACCTTTG AATACGAAGC AGGATCAGAC AATACCTATG CTTTTGTAGT CGGTAAGGGA    6300

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AACCTCAGTC AGGCCGATGA TGATATCAGT GTGGAAGAAG CGCGTGCAGA GATTGCCAAG    6720

ATTGAAGCTT TGAAGAATGC TTTGGTTCAG AAGAAGACGG CTTTGGTAGC AGATGACTTT    6780

GCAAGTCTTA CAGCTCCTGC TCAGGCTCAA GAAGGTCTTG CAAATGCCTT TGATGGCAAT    6840

GTGTCTAGTC TATGGCATAC ATCTTGGAAT GGTGGAGATG TAGGCAAGCC TGCAACTATG    6900

GTCTTGAAAG AACCAACTGA AATCACAGGA CTTCGCTATG TTCCGCGTGG ATCAGGTTCA    6960

AATGGTAACT TGCGAGATGT GAAACTTGTT GTGACAGATG AGTCTGGCAA GGAGCATACC    7020
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976

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TTTACTGCAA CTGATTGGCC AAATAACAAC AAACCAAAAG ATATTGACTT TGGTAAGACA        7080

ATCAAGGCTA AGAAAATTGT CCTTACTGGT ACCAAGACAT ACGGAGATGG TGGAGATAAA        7140

TACCAATCTG CAGCGGAACT TATCTTTACT CGTCCACAGG TAGCAGAAAC ACCTCTTGAC        7200

TTGTCAGGCT ATGAAGCAGC TTTGGTTAAG GCTCAGAAAT TAACAGACAA AGACAATCAA        7260

GAGGAAGTAG CTAGCGTTCA GGCAAGCATG AAATATGCGA CGGATAACCA TCTCTTGACG        7320

GAAAGAATGG TGGAATACTT TGCAGATTAT CTCAACCAAT TAAAAGATTC TGCTACGAAA        7380

CCAGATGCTC CAACTGTAGA GAAACCTGAG TTTAAACTTA GATCTTTAGC TTCCGAGCAA        7440

GGTAAGACGC CAGATTATAA GCAAGAAATA GCTAGACCAG AAACACCTGA ACAAATCTTG        7500

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GGAAAGTCTT GGCGCGGTTG AGTCCGACCT TGTTTAGAGT TTCCACGGCT GGGACGTTTC        8640

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AAACAGGAGT ATTTGTCCCA GGGTAGTTAT AGGGCTCATC GTGAACGATA GTAGCAGTTG        8760

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977

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GGCGTGCTCC TAGCTGGGCA ATGACTTTAC CGTTAGAAAC ATCAACAATG GTAGAAGCGA          8940

CTTGCAATTC ATCGTCTGGA TAGGCAACGT ATTCGTCTGT ATTGTAAATA TCCCACAGAT          9000

GTTTTTGAGC TTCTTGGTCT ACATTTGTGT AGACATCCAT CCCAGTTGTG AGTAGGTTAT          9060

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GGTAATTACT TGCTGATTTG AGACTTTGTA GTCCATCAGT AATTGGTGTA TTGACTGCTT          9180

TCTCATACTG TTCAGCAGAG ATGTAGCCTT GATTTTTCAT TTCAGATAAG ACCAAGTTTC          9240

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GAGCCTTACG AGAAATAGTC TGGTCGGAAG TCGAAGTTGA AAAGTAAGTC AACTTAATCA          9540

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GGCGCAGAAT CGTTGGTTTG TTCATCTTGT TTTACCACCT AATAAATGTT CTTTGATAAC          9960

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TGCCGGCAAT AAGTAGGTTT CTTGCTGAGA AGAAAAGTGA AGAAGGACAA AGCAGATTCC         10140

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AATCGCACGT TTTTGTTTTG TTTCCTTGAC TTCAAAGTCG ATGTAATATC CATTATAAAC         10260

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CAAGCCCTGA GACAAATAGT AGTCGTTGGT AGCATTGATC ATCTTTTCAA AGGGTACCGA         10440

GCTCGAATTC GTAATCATGT CATAGCTGTT TCCTGTGTGA AATTGTTATC CGCTCACAAT         10500

TCCACACAAC ATACGAGCCG GAAGCATAAA GTGTAAAGCC TGGGGTGCCT AATGAGTGAG         10560
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978
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CTAACTCACA TTAATTGCGT TGCGCTCACT GCCCGCTTTC CAGTCGGGAA ACCTGTCGTG      10620

CCAGCTGCAT TAATGAATCG GCCAACGCGC GGGGAGAGGC GGTTTGCGTA TTGGGCGCTC      10680

TTCCGCTTCC TCGCTCACTG ACTCGCTGCG C                                    10711
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(2) INFORMATION FOR SEQ ID NO: 146:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 11887 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 146:
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TACATTCATT CCATCGGCTA CTCCATAATA CTTAGATAAA ACCATAGCTG AAGTCGAATA        60

CGGATACTGT AAAGTATTAT CAATTTTAAT CAAATCATCA TTACCGATAA TACTTCTGAT       120

TGCTTTTGGT AGTATGAACC ATACGTTGGT GAAATCTCAG ATAATGAAGA ATCATTAGAC       180

TCTGGACCTT TTTCTAGTGT CTCACTTACC TCATATTCTT CACCCTTACT AGAAATAACA       240

CTCAAAGCAG ATACTGTCGA TAACTGGCTA GCCAATAAAG TACTCGCAAT AATTGAAATA       300

CCCAATTTTT TATAAACAGT TTTCTTCATT ATTGTATCCT CCTAATGTAA TTATAGCGTA       360

CTATTCTAAA TTTCTTAATC TACTATAGAA TCAAGAAATC TACCACCTTC TTTAAATACC       420

CTCCATTATC ACATAAACAG GTAAACTTTT CAATTAATGA CTGCGCTTTT CAATCACGCT       480

AGAGGTACTT GCTTGCTTCT TTGATACTAA GTTCAGCCAT TCTTTCCTTG TTTTTCTCAA       540

TAAAGCATGT TACCCAAGTG GGATTCGTTT TGGAGTAGTC TCGCAGAGTC CAGCCAATGG       600

CTTTATTGAT AAAAAATTCT GTTTGGTTCA AGTTATGAAG GAGAATCTTT TCCATTAATT       660

GAGTATTGGT CTTCTCTTTT CTTAACAACT GGTGGTCAAT AGCGACACGT CTCAGCCAGA       720

TATTATCTGA TAGGCTCCAT TTTATACTCA ATGAAAATCA AAGAGCAAAC TAGGAAGCTA       780

GCCGCAGTTG CTCAAAACAC TGTTTTGAGG TTGCAGATAG AGCTGACGTG GTTTGAAGAG       840

ATTTTCGAAG AGTATTAAGA TTATTTCTTC TAGTTCAGGG TGTTCATACA CCAAACTCCC       900

TACTACTCGA TCTAGGATAT CTACCGTGTC CCACAAGGAT TTTGTCACGA CTAACTGCTC       960

TAGCTTAGGC AAATCGGTTT CCTTTAGATA AGACTGCATT GCTTTCAAAT AGTTAGCAGC      1020

CACATATTGG TATTTTCTAG GATCCTTTTC CCAGCAAGTG TCTGCAAAAT CCCAATCGAT      1080

AATCTTTGTT TTTTTCGCTT CTGGAAAATA TTTTATAGAG TTTATTTCTT TCAGGCACCG      1140

CAATACCTAG AAAAGAAAAT TGATGGCGCA TATAGGCTTC CATGGACCTT GCTTTTTTAG      1200

AGTCTTTTGC TGCTTCTAGC TCCTCAAGTA AATCTGCTAA ACTCATCTAA AACTCCTCTT      1260
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979

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GCCCCACCAA ATGGTGCTGA AAGGCATAGA CAGCCGCCTG GGTACGATCG CTGACTTCAA    1320

GTTTGGCAAG AATATTGGAC ACGTGGGTCT TGACCGTCTT GAGAGAGATA AAGAGGTCAT    1380

CTGCGATGCG CTGATTTTCG TAGCCCTTGG CGATGAGTTG GAGAACATCT CGCTCACGCG    1440

CAGTCAATTC TTCATGAAGT TCCATATGAT TGCGGTGGTA TTCAACCTTC TTGCTAACCT    1500

CTTGCTCAAT GGCCAGCTCG CCAGCAGCTA CCTTACTGAC GGCATGAAGC AATTCATCTG    1560

CACTAGAAGT CTTGAGCATA TAGCCTTTGG CACCAGCATC TAAGACTGGC ATGATTTTTT    1620

CATTGTCCAA ATAAGAGGTC ACAATCAAAA TCTTGGCTTC AGGCCATTCT TTAAGGATTG    1680

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TCAACCCGCT CCTTGATATT TCGCAGTCCA TAACTCAAGT CGTCTAAGCT CCCTAACTGG    2040

AAACCAATCC CATTGTCCAC CACCTTCAGT TGCAATTCAA CATCTGTCTG ATAGAGGTAG    2100

ACATCTAGGC AAGATGCCTG GGCATGGCGG AGGGTATTGC TAATCAACTC TTGCAGGATA    2160

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TCTTGTTACT CTTGAGATAG TCTTTTGTTT CTTGATGATA GTGTTCATTG CGGAGGGCTC    3000
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                                    980
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CCACATCTAC AGGTACGATG ATTTTGGTCG TTCCTACCAT CTTTCTGAGG ATAATGACAT        3120

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TTCTTGATAT AAGAGCTCAA TCCCCAGATC GGCCCAACGA TTTTTTAAGG TTTTGGTTGA        4740

TTGCGCATCA AAACTCAGGG CGATGCCACA GTCACCACCA CCAGCACCAC TACTCTTGGC        4800
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981

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TTTCCCCTGT TCCAAGGCTT CTACCAGAGA AGTCACCGTT TCTTTTGAGG AAGTTAAAAA        4980

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982

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ACCATGGCTA AGAGTCGTTT CAACCAAAAA GTCTGCCCTCA GGGCTACTGA CTCCAATTTC       6780

TTTTAAATGT AAATGCGCTT GACTGAGGAT TTGTCCCAGT CCTTCAGCAT CTTTTTGTGA        6840

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983

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GAGATACAGC CAAAGAAAGC ATTTTAGACT ATAGCTTTGC TCATGGATAT TGTGGAATTG    8940

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984

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TCAGAATCAT CTGCAAATAC TGTACTGGTC CCTAGCAAAC CAAAGAAAAA TACTGTCAGT    11760

CCAACTTGCA TAGTTTTTTT CAAAATTTTC ATCTATATAC CCTCCAATAT TAAATCCACT    11820

CACCAGATGA GGCGAAATTA TAAACTTTAC CATCGATAGT TTGGCTACCT GTAACCATTG    11880
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985

CTCCAGG   11887

(2) INFORMATION FOR SEQ ID NO: 147:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 11340 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: double
       (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 147:

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GTACGAATAC CTTAAGGAAT ATGACCGATT TTTCAGCTGG GTTTTGGAGT CTGGTATTTC       120

AAACGCTGAT AAAATATCCG ATATTCCTTT ATCAGTTTTG GAAAATATGT CTAAGAAAGA       180

CATGGAATCC TTTATCCTTT ATCTACGTGA ACGTCCCTTG CTGAATGCTA ATACAACAAA       240

ACAAGGTGTT TCACAGACAA CTATCAATCG AACCTTATCA GCACTTTCTA GTCTTTACAA       300

GTATCTAACC GAGGAGGTTG AAAACGATCA GGGGGAACCT TATTTCTATC GTAATGTAAT       360

GAAAAAGTT TCCACCAAGA AAAAGAAAGA AACCCTTGCT GCCAGAGCTG AAAATATCAA       420

GCAAAAACTC TTTCTAGGTG ATGAAACAGA AGGTTTTCTA ACTTATATCG ATCAAGAGCA       480

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TCTAAGAGAT CTCAATCTAA AAATGATGGT TATTGATGTT ACTCGAAAAG GTTGCAAACG       660

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TGCGACTAAA TCACAAGTTT TAGTCAGTCA CCAACTAGGA CATGCTAGCA CACAAGTCAC       960

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ATATCAATGG TTTTTAGCGC CTTAAGAACA TCTTCGCGTT CGTATTTCAC CCCACGAAGG      1200

ACATCTTCTA CTGCAGCAAC GTCTTCAATA CCAAAGAAGT CACCATAAAT CTTGATGTCT      1260

TGGATTTTTG ATTCAGTAAC GTTAGCAAAG ACTTCAACCT TACCACTAGT GAATTTGATT      1320
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986

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TCTGGGTACT CTTTTTTCAT GTATTCCAAG AGTAAATCAC GGAATTTTTC GACTGTGATT        1500

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ATACCAGGGA CGTTGATCTT GTTGACTTTT GAACCACCAG CAAGAATGAT TTTCTTGGTT        3120
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987

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TCAAGCAATT CAGAACCATT TACCAAGACG TTCTTGTCTT TAGTGATTGT ACCAATTCCT    3180

TTATGAACAG TAACTCCGTA GCTACGAAGA AGTCCTGCAA CACCACCAAC AAGAGTATTA    3240

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ATCACGATAC CACGATTTGC AGCATGACCG ATATTTTCAA TAATTTCAGC GTTATGAAGG    3360

TAGGTCTTGG TTGGAATACA TCCACGGTTT AAGCAGGTTC CACCAAGTTC AGATTTCTCA    3420

ACAAGGGCAA CCTTACCGCC GAATTGGGCA GCTTTAATGG CTGCAACATA ACCAGCAGGA    3480

CCTCCACCAA TCACAACGAT ATCAAAAGCA TCATCGCTCT TACCATCATC GTTTGAGGTA    3540

CTTGCTACAG GTACAGGGCT AGCTTCTGGC GATGCTGCTC CAGCTGTTGG GATGTTTTCC    3600

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AGAATGGCAA TCAAGTACCC ATCTTCTTCG GCTTCCAATT CCATGCTGAC TTTATCAGTC    3720

ATGATTTCCA AAAGGATTTC TCCTTCTTTT ACAAATTCTC CGACTTTTTT ATTCCATTGG    3780

ACGATTTGTC CTTCTGTCAT ATCCACGCCG GCTTTTGGCA TAATTACTTC TAAGGCCATG    3840

TCTTCCTTCC TTTATCTATA TCTTAAAAAT GAATACTCTT GCTCTTAAAT TAACATTGAG    3900

ATTGGCGTTT CAATCAACTC TTTCAAGTCC TTCATAAACT TAGCACCAGC CATACCATCT    3960

ACGACACGGT GGTCAATGGT TAATCCTAAA CTCATGATTG GGCGAATCAC AATTTCACCA    4020

TTGACGACAA CTGGCTTCTC GATTGTCGAA CTGACACCAA GGATAGCTGA GTTGGGTTGG    4080

TTAATAATCG GACCAAAGGA CTGAACACCA AACATTCCCA AATTACTGAT TGTGAATGTT    4140

GAATTTTGTA ACTCACTTGG AGCCAATTTA CCATCCAAGG TACGGCCAAT AACATCCTTA    4200

AAGGCTACAA CCAGTTCTGA AAGACTCATC TTCTCAGCAT TGTAAACAAC AGGTGTCATC    4260

AATCCATTAT CCATCCCAAC TGCCATGGCA AGATTGACAT AGTTGTGAGT GATAATAGTC    4320

TTGCCATCTT CTGTCAATGA AGCGTTGATG TATGGGTGTT TCATAAGAGT CTTAACAACT    4380

GCAAGCGAAA GAAGGTCTGT TACAGTAGTC TTCTTCCCAG TTGCTTCCAT GATTGGCTCA    4440

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ATTGGAATAC GCTCGATTTT ACCATATGGT GTTACGTTAT CAGGGACTTC TTCCACTTTT    4620

TCAATCTGAG CAGGAGATTT GATGCTATCG TTTTCGATAT TTTCAGGAAG CAGGGCCAAA    4680

ACATCCTTCT TCATGATTTT ACCACGATGA CCGGTTCCTT GGATTCCTG CCAAGCAATG     4740

TTATGTTCGA GGGCAATTCG TTTTGCAAGT GGCGAAATGC GAACCACGTT TGTGTCTTTA    4800

TAAGTTTCCA CGTCTTCTTT GTGGACACGA CCGTTTGCAC CTGAGCCAGA AACGTCGTAG    4860
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988

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TCAGCCATGA CCTCTCCAAT TCTATTTATG ATACAAAGGG CGTCAAAAGC GACTGAAAAA       4980

TAGGAAATCG ACGATGGCTT CGATGAAGCC AAGGAGATTT ATCTTTTTTC CGATCTTTTA       5040

GCCCGTGCTC TAATCTAAGA TATTAATGAC GAAGAGCTCT GCACCTAAAA GATACAAAGT       5100

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AGTTTTTCGG ATTGCATCTT TGATACTTTC AACTGTTGGA ATCATTGCAT TTTCTAGGTT       5220

TTGTGCATAA GGCATCGGCA CATCTTCTCC TGCACAACGG CGAATTGGTG CATCTAGATA       5280

GTCAAATGCT TCTGATTCTG AAATAATAGC TGAAATTTCA CCGATATAGC CACTTGTTTT       5340

GTGGGCATCG TTGACCAGAA CAACCTTACC AGTCTTCTTC ACTGAGTTTA TGATGATATC       5400

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CATGTAACGT GTTTTAGCAG CTTGGTTGAC GATATTGTCC ATGGCAATAA CAGAGAAGTC       5880

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TTGATGGATA TGTTCTATAT TGGTCATTTT CTTGATATCC GCAGAGATAC CGTAACCGTT       6600

GTTAATGCAA TAGAAAATGA CTGGCAGGTT CCAGATAGAA GCCATGTTCA CTGCTTCGTG       6660
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989

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TTTTTCACAA ACTTTTTAGC ATTTGGATTT TGCTAAAGAT TCAAATCTCT TCATAATCAC    7320

AGTTAAACGC CAACGGTAGA GCGCCCCGCT CACAATCAAA CTAATAATCA AGCCGATCCA    7380

GTAAGAATAA GCTCCAAAAT CTGTTAGGGA ATCAAATAGC GTAnCACAGG GATTGCTACG    7440

CCCCAATAAC CAAGCAAACC AAGGTAAAAA GGAATAACTG TATCCTTATA CCCCCGCAAA    7500

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GCTGACTGGT GACTAGCTAT AATCAAGGGC GAAAACTTAG CCATAATCAA GCCAACCACT    7860

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ATAGATAAAA ACCAAAGATA GCGAACCGCT ACTGCCGCTA CTGCTGCTTC TAACCCAATA    8280

TGATTCAAGA TTATTGGTGC CAAGAAAAGT ACCATCCCCA GCAAGACCAC AGATAGGCCC    8340

AAGGCCAAAT AAATAAATTG GTAAAAATCA GACGCAACTT CTTCCTTTTT GCCTCGACCA    8400
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                                         990
AGATGGTGAC CAATGATAGG CACCAAGGCT GACACAATCC CTGTTAGAAA TGTAAAGAAA    8460

GGATTCCAGA TACTGGTTGC CATAGATACA CCAGCCAAGT CCATAGTGTT GTATTGACCT    8520

GTCATTGCAG TATCAACAAA AGAGGCAGAA TAATTGGCAA ATTGGTAGAT CAGGATTGGG    8580

AAGAAAATTT TTAAAAATAA TACTAACTTC TCTCGTAAAC ACTTTGTCTT ATACATACTT    8640

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CGGAGGTTTA TTAGATTTTG AAGTAGTATG CCAACACGCA CATGTACGAC AATAATAGCT    8760

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GATTCATCTT AGCATTGCTA CCTTGTGTTA AAAGAAGTGC TTCTGTCTTA GAGAAATGCT    9420

GTGGCGCTAC TTCTGCTGTG ACTTCTGCAC CTAACCCCTG AGCAAACTCC ACTACTTTAA    9480

CACTTTCTTC CTTAGACAAA TGCTGGATGT GAACATGGGC TTTAGTTGCA TAGGCAATCA    9540

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TAATCTTCTC TTTGGCAGCT GACTGGAGAA CTGCTTGCAA AGTCTCCACG TCTGAAATGG    9900

TTGGACTGGT ATTAGCCATC ATGACGACAG TAGTAAAACC ACCTGCAGCG GCTGCTAGGG    9960

CACCAGTATG AATGTCTTCT TTATGTGTTT GACCAGGTTC ACGGAAATGA ACATGAATAT    10020

CGACCAAGCC AGGAGCAACC ACAAGACCAG TAGCATCAAT CGTTTCTGCT CCTTCTTCCG    10080

TGATCTCAGA CGCAATTTTG ATAATTTTCC CATCTTGAAC TAAGACATCA CAAACTTGAT    10140

CCAAACCAGA CTTGGGATCC ATTACACGAC CATTTTTGAT TAGTAGCATC TGCTTTCTCC    10200
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991

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TTTATTCATA GAAATCAACT TGGGTATCCA ACAATTTATC CCCATCATAA ACAAACTTGG        10260

CTGAAAAGAA GGGTTTATCC TCTAAAAGCC ACTCAACAAA GGTGTGGTCA CCTTCCCAAG        10320

TCGGCTTGCT CAAAACCTCA TCATAGGGAA CCCATTCTAG CGTCCCCTCA TTGCAGTCAA        10380

TCAAGTCGCC CTCAAACTCC GTCACCTTAA AAACATAGGT GTACCAGTCT AAATCTGGTG        10440

TAAATTCAGG AAAAGTGATG ACACCTTTTA GAACTGGCTT GGCTTTGAGC CCTGTTTCTT        10500

CAAGGATTTC ACGCGCCGCG CATTCCTGGG GCGTCTCTCC TCTCTCTAGC TTACCACCCA        10560

CACCAATCCA TTTCCCTTCA TGGACATCAT TGGGTTTCTT ATTACGATGG AGCATGAGCA        10620

GTTCTTTCCC ATTATCAATG TAGCAAATCG TCGCTAACTG AGGCATATTT TCTCCTTATC        10680

TAAGCCAATC GATTGGCTCT TGTCCTGTCT CTTTTAAGAA TGCATTGGCC TTGGAAAAGG        10740

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CATCTGACAA TTCTTTCAAG ATATTTTGCA AGGATGGTGG AGCTGGGATA GAGTCAGGTA        11100

CAGAAAAACT CAAGCCCTGC GCTTGACCTG GTCCGTGATA GGGGTCTTGC CCTAGAATTA        11160

CCACCTTAAC TTCTTCAAGC AGTGTTGTCA AGAGAGCCTG AAAAACCTTT TCCTTGGGTG        11220

GATAAATAAT CCCCTGAGAA TAGACCTGCT CCATAAACTG ATTGATTTTC CCGAAATAAC        11280

CCTCAGGTAA TTGCGCCTTA ATCAAAGCAT GCCAAGACGA GTGTTCCATA GCCGACTCGG        11340
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(2) INFORMATION FOR SEQ ID NO: 148:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 12127 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 148:

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AAAAAATAGA CTTGTTAGAC TATAAATGTA GTAAGCCTAC ACAAGAAAAA TACATAGAGA          60

TAAAGGTGAT TATTATGAAA TTCAAAAAAA TGCTTACTCT TGCAGCCATT GGCTTATCAG         120

GATTTGGGCT TGTTGCCTGT GGCAATCAGT CAGCTGCTTC CAAACAGTCA GCTTCAGGAA         180

CGATTGAGGT GATTTCACGA GAAAATGGCT CTGGGACACG GGGTGCCTTC ACAGAAATCA         240
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992

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CAGGGATTCT CAAAAAAGAC GGTGATAAAA AAATTGACAA CACTGCCAAA ACAGCTGTGA      300

TTCAAAATAG TACAGAAGGT GTTCTCTCAG CAGTTCAAGG GAATGCTAAT GCTATCGGCT      360

ACATCTCCTT GGGATCTTTA ACGAAATCTG TCAAGGCTTT AGAGATTGAT GGTGTCAAGG      420

CTAGTCGAGA CACAGTTTTA GATGGTGAAT ACCCTCTTCA ACGTCCCTTC AACATTGTTT      480

GGTCTTCTAA TCTTTCCAAG CTAGGTCAAG ATTTTATCAG CTTTATCCAC TCCAAACAAG      540

GTCAACAAGT GGTCACAGAT AATAAATTTA TTGAAGCTAA AACCGAAACC ACGGAATATA      600

CAAGCCAACA CTTATCAGGC AAGTTGTCTG TTGTAGGTTC CACTTCAGTA TCTTCTTTAA      660

TGGAAAAATT AGCAGAAGCT TATAAAAAAG AAAATCCAGA AGTTACGATT GATATTACCT      720

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TTTCTAGGGA ATTAACTCCT GAAGAAGGTA AGAGTCTCAC CCATGATGCT ATTGCTTTAG      840

ACGGTATTGC TGTTGTGGTC AATAATGACA ATAAGGCAAG CCAAGTCAGT ATGGCTGAAC      900

TTGCAGACGT TTTTAGTGGC AAATTAACCA CCTGGGACAA GATTAAATAA AATGTTTGCT      960

CCATAAATCT CTAAAGAGAT GCAGACGTTT CATCGTACAA TAAGATAAAG AAGGCAAGTA     1020

GGGAGGTGTC GTATCTCCCT TACTTTCTTC ACTAGAAAGG ACAAGATGTG ACAAAACAAG     1080

CCTTCAAAGA AGCAGTTTTT AGGGCAATTT TTTTCATGAG TGCAACAGTA GCTGTTGTAG     1140

CTATTTTGCT AATCTGTTTC TTTATTTTTA GTAATGGCTT ACCTTTCATA GCTAACTACG     1200

GCTTTGCCCG TTTTTTATTA GGCAGTGATT GGTCGCCAAC GAACATTCCG GCAAGCTATG     1260

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ACCAGCCGAT TATTCCAAGT GGACTCTTTT CAGGAACCAG AACCTTAACA ACCAATATTG     1800

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TCTCTCTTTT TAATCATTGG TTTTATCCTC ATCAAAGGCT TACCTCATCT AAGTCTATCC     2040
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993

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CTCTTTTCTT GGACTTATAC TTCTGAGAAC ATTTCCCTTA TGCCAGCGAT TATTTCCACC    2100

GTTATTCTGG TCTTTGGTGC TCTTCTTTTA GCCTTGCCCA TAGGGATTTT TGCTGGTTTT    2160

TATCTTGTGG AAATATACAAA AAAAGATTCC CTTTGTGTTA AAATCATGCG ATTGGCCTCA    2220

GATACCTTAT CTGGGATTCC TTCCATTGTT TTTGGTCTGT TTGGCATGCT CTTCTTTGTA    2280

GTCTTCTTAG GTTTTCAATA CTCTCTGTTA TCAGGAATCT TAACCTCAGT TATCATGGTG    2340

TTGCCAGTCA TTATTCGCTC AACAGAAGAA GCCCTTTTAT CTGTTAGTGA TAGCATGCGT    2400

CAAGCAAGTT ATGGACTTGG GGCAGGTAAG TTACGGACTG TTTTTAGAAT TGTTCTACCA    2460

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ATCAACCAAG GTCAAAGCGC TATCGAATTG ACCTGTGCCC GTTTGTTGGC CTTGCAGCAG    3720

CCACAAGTGT CTGACCTTCG ATTTGTGATT AGCATCATGT CTTCTTGTTC AGACCTTGAA    3780
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994

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CGTATGGGAG ACCATATGGC AGGCATTGCC AAAGCTGTTT TGCAACTAAA AGAAAATCAA        3840

CTAGCCCCTG ACGAAGAACA GTTACACCAA ATGGGTAAAT TATCCCTCAG CATGCTAGCC        3900

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TCCCGAGCAA ATCAATGAAA TTAATACACA CCATACTAAT AAGCACTACT TTAAAGATGT        5580
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995

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CGTTCTAGAC GAAAATATCA TTGCCTACAC CGACTTAGCA GAAACATTGA AAGATGTGGA    5640

TGCGATTTTG TTTGTTGTCC CAACAAAAGT GACACGACTT GTTGCCCAGC AAGTTGCACA    5700

AACCTTGGAC CATAAGGTTA TCATCATGCA CGCATCAAAG GGATTAGAAC CTGATAGCCA    5760

TAAACGATTA TCAACCATTC TTGAAGAAGA AATTCCTGAA CATCTCCGTA GTGATATCGT    5820

CGTTGTTTCA GGGCCTAGTC ATGCAGAAGA GACCATTGTG CGTGACCTAA CTTTAATAAC    5880

TGCTGCTTCT AAAGATTTAC AAACAGCTCA ATACGTTCAG AAGCTATTTA GTAATCACTA    5940

CTTCCGACTT TATACCAATA CGGATGTTAT CGGGGTTGAA ACTGCTGGTG CTCTTAAAAA    6000

TATTATTGCT GTCGGTGCTG GAGCTTTACA TGGTCTTGGA TTTGGTGATA ATGCTAAGGC    6060

AGCCATCATC GCTCGAGGTT TAGCAGAAAT CACCCGCCTA GGGGTAGCAC TCGGGGCCAG    6120

TCCATTGACC TATAGCGGCT TATCTGGTGT GGGAGATTTG ATCGTAACGG GAACTTCCAT    6180

CCACTCTCGT AACTGGAGAG CTGGAGATGC TCTCGGACGA GGAGAATCCC TAGCTGATAT    6240

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AGCCCAAGAA CTTGGAGTCT ATATGCCCAT TACACAGGCT ATTTACCAAG TTATTTATCA    6360

CGGAACCAAT ATCAAAGATG CCATTTATGA CATCATGAAC AATGAATTTA AAGCAGAAAA    6420

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AATGTTGCCA ATCGTAGACA AACCAACTAT CCAGTTTATC GTGGAAGAAG CTCTCAAATC    6600

AGGTATTGAA GATATTCTAG TTGTCACTGG TAAATCAAAA CGTTCTATTG AGGACCACTT    6660

TGATTCAAAC TTCGAATTGG AATATAACCT CAAAGAAAAA GGGAAAACAG ATCTTTTGAA    6720

GCTAGTTGAT AAAACAACTG ACATGCGTCT GCATTTTATC CGCCAAACTC ATCCACGCGG    6780

TCTCGGAGAT GCTGTTTTGC AAGCCAAGGC TTTCGTCGGA AATGAACCTT TTGTCGTTAT    6840

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ATCCATCGAC TACGCCCTCA AACACCCACA AGTCAAAGAT GATTTGAAGA ATTACCTCAT    7320
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996

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CCAACTTGGA AAAGAATTGA CTGAGAAGGA ATAACAAAAT CATTTATATA AAGATTAGCC      7380

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CGCTATACTT GTATTTGTTT TTTCATTAAA ATAAGAGTAG AATAAATTAG TATAGTAAAA      7500

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GTAATTGCGG ACACTATCAA AGAAAAAGAT TATGGAGAAC AAATTTGTAG AATTTATCGA      7800

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TGGATGGTAT TCATATAACC AACAACAAGC AGAACAACAA GCAAAAATTG TACAATTAGA      7920

AAAAGATAGC AAATCAGACA AAGAACAAGT TGATAAACTA TTTGAATCAT TTGATGCATC      7980

TTCAGATGAA TCTATTTCTA AATTAAAAGA ACTATCTGAA ACTTCACTTA AAACCGATGC      8040

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AACTCTTGAA ACAAATGTAA AAGAAATTAC AAAACAAATT GATTTTATCA AAAAAGTTGA      8220

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TAAATATCAA AAACAAATCG AACTTTTGAA GAAACAAGAA GAAAAAGCTG CTGAAAAAGC      8340

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ATATTCAAAT AATTATGGCG GTCAAGATTA TTCTGGTTCA GGAGATAGTT CAACAAATGG      8520

TGGATCATCA GAACAATATT CATCTAGCAA TTCAAACAGC GGAGCAAATA ATGTCTACAG      8580

ATATAAAGGC ACTGGTGCTG ACGGCTATCA AAGATACTAC TACAAAGATC ATAATAATGG      8640

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CTCAAAGCAG TGCTTTGAGC AACCTGCGGC TAGCTTCCTA GTTTGCTCTT TGATTTTCAT      9000

TGAGTATTAG TCGTCACAAT CCCATTCCCT TGTAGAAAAG CAAAATGGCG AGTCCTACGA      9060

ACAAGACTAC CGCTCCTAAT CTCTGGCTGG TGTTATACAT CCGTTTTTCT CCTCTAACTG      9120
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997

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GAAAGATAAC TGCTAGAAAT GCGCCACCAA CTGCACCACC GATATGGCCT GCTAGGCTGA      9180

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ACCCAATATG AACAAAAATG GCAGACAAGA GACGCCAAAC CTGCTCGGGA AAGAGGCGAA      9540

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CTGCAGTGAC CAACATTAGT AAAAATACCA AGGCCGTCAC TAAGAGGAAG AAACTCGTCA      9660

CAGGGTAACG TCTATCAAAG ATTTCCTTCA TCAATTAATA CCTCCTGAAC AGGAATATCA      9720

TGGTTTTCAG GTATAAAGTC CTGAATTTGA CAAGGATATA TCGTACTCAA AGTACGACCA      9780

GAAAAATGTT CCAGATAGCG GTCATAATAG CCTCCACCGT ATCCTATCCG ATATCCTTTC      9840

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CCGCAGCCAC CCCAATAGCT AAGACTTCTT CCTTAGGACT CATTTGAGGG TGATGAAGAG      10320

CGTAGGGACT ATCGATACCT AGCCAAAACA TCACGCCATC AACCTTTGAA AGGAGATAAC      10380

CAAAGTCCTC GCCTGTCATA GCAGGTTCGA TATCAATCAA CTCGATTCCG TCTTTTTCGT      10440

CAAAGAAGTC CATCAGTTCA CGCGCCAAGG CTGGATTGTT CTCAACAGGT AGGTATCCAC      10500

CTTGTTTGAG TTCCACTTCG ACTTCCATAT CAAAGGCAGC TGCAACCCCT TCTGCAACTG      10560

TTTTTACCCT CTTTTGCACC AAGAGACTCA TGTCCTGTGT CAAGGCACGA ATAGTTCCAT      10620

GTAAAAAAGC TGTGTCTGTG ATGACATTGT TGGTGGTTCC AGCTTGAAAA ACGCCGAAGG      10680

TCACCACTGC TCCCTCGATT GGGTTGACAT TGCGGCTAAC AACTGACTGC ACTTGGGTCA      10740

CAAAGTAACT AGCCGCCACC AAGGCGTCAT TGGCTTCATG AGGAAAAGCT GCGTGGCCAC      10800

CTTTGCCTTT GAAACGGATC TTCACCTCGC AAGTTCCTGC AAAGAGTGTA TGAGTATTAG      10860
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998

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TCGCAATCTG GCCGACTTTC AAATCTGGAC GAACATGGAG ACCATAGAAT TGATCTGGCA    10920

ACCAATCTCC AAAAGCACCG TCCTCATACA TGAGCATACC ACCAGCTTCA TTTTCTTCAG    10980

CAGGCTGAAA TAGAAAGAGC AGATTATTCT TGGGTTGCTC CTCAAGGGCG CGCTCAAGAC    11040

AGCCTAAGGC AATGGTCATA TGAAAATCAT GGACACAGGC ATGCATGCGA CCTTGGTGTT    11100

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TTCTTTTCAG CATTGGCGAT AAATTGGATA ATTTCTTGAG CGTTCATTTT TGTAGCAGTC    12120

ATAGGTG                                                            12127
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(2) INFORMATION FOR SEQ ID NO: 149:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 12566 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 149:

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CCATCCTTCT GTTGATGTGA CAGGAATGAT GATAAATCAA CCAGTAGCTA GTCGCGAAGA    60

GGTGACAGAG GCTTTGAGTC ACTTGGCGGT AGAGCACAAT AGTCTCATTG CTCGTCGAAT    120
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999

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CGTTGAGCCA AATGAAGCTG GAGAAACACG CTTTACCTAT GCCACTTATG GTGAGGGAAA      180

GCTTCCAGAA GGTCTGACCA TTTCCTCCAA GGAGAGTGCA GAAACGAGTG ATTTATTAGG      240

GTCTTACTTG ATTGTATCAG GAAGTTTGGA TGGAGTGAGC TTACAGACCA CCTTGAAAGA      300

GCTTGGTTAT CAAGGCTTTG TTTCGAATGG AGAAGATCCA TTTTCGATAG TCTTACTATT      360

GACGGCCACC CCTATGGTGC TACTGAGTTT AGCTATTTTT CTGCTGACCT TTATGAGTCT      420

GACCCTGATT TATCGGATCA AATCCCTTCG TCAGGCAGGG ATTCGCTTAA TAGCTGGTGA      480

GAGCTTGTTT GGAGTTGCTC TCAGACCAGT GTTAGAAGAT GTGAGACAGC TTATCTGCTC      540

AGTGCTGGTA TCCAGTCTTT TGGGATTGGG GATTCTCTGG TATCAAGGTG CCTTGTTTAT      600

GGCAACGGTG CAACTGGTCA TCATTGCTCT TCTACTTTAT GGATTGACCT TGGCAGGGAT      660

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TGGTTGGTCT AGTGCATTTG CCGATGAAGA AGGAACGCGT AAGGATAATC GTGAGTGGCA      960

GACATTTACT GAAGAACGGT TAGCCAATAC AGACTCTTTT TATATTATGA GCAATGTTGA     1020

CAATTTCTCA GATGGAGCAG AAGTGGACCT AGATGGCAAT CGTCTCAGTG ACTACACACC     1080

GTCAGGGAAT GTTATCTATG TCTCACCGCG CTATCTGATA GAAGAAAAGA TTACCGTTTC     1140

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TATTGGGACG ATTTTGACCC TGTCTACGGC TATCTTGTTA TTTGATTCCA TGAATCTTCT     1680

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TGAGCTTCAT GGCAAGTATT TACTGGCGCA AGGAGGAGTT CTCTTGCTTG GCCTAGTCCT     1800

ATCTAGTATT TTGACAAGAG ATGGTTTGAT TAGCGCTCTA GTTGTAGCTT TGTTTACGCT     1860
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TAACGCCCTC TTGATTTTAG TAAGGCAGGA CAAAAAAGAA GAAGCTGGTA GCATGGCAGT      1920

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CGATTTTCTC TGGTTTGAAT CTCAAGCTGG AGAAGGGCAA GGTTTATGCC TTAATCGGAA      2040

AGAGTGGAAG CGGAAAGACG ACGCTGCTGA ATATCTTGGG AAAGCTAGAA AAGATAGATG      2100

GTGGAAGGGT TCTCTATCAG GGGAAAGATT TAAAAACCAT TCCCACTCGT GAGTATTTTC      2160

GAGACCAGAT GGGCTATCTC TTTCAAAATT TCGGCCTCTT AGAAAACCAA TCAATCAAAG      2220

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TGAATCTCTT GGTGGATTTG AAAGATGAAA ATCGAATTAT CATCATTGCG ACCCATAATC      2520

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AAAATCCGTA TTCGCAGGGT ATCTGATTAT CCTAGTGCCA GAGGTGGTTT AGAAGATATC      2640

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GTATTACATG ACAGCCAAGG TTGCCTTTAT CGTGCCTCGT ACGGTCTTTG TGCCAGCGCC      3600

AAATGTGGAT TCAGCCATCT TGAAAATGGT GCGTCGTCCA GAGCCAGCCG TAGCAGTAGA      3660
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1001

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AGATGAGAAC TTTTTCTTTA AGGTTTCCAA GGCTAGTTTT ACCCATCGCC GCAAGACCTT   3720

GTGGAATAAC TTGACAGGTT ACTTTGGTAA GACTGAAGAG GTCAAGGACA AGCTGACCAA   3780

GGCTTTGGAC CAGGCAGGCT TGTCACCAAG TGTGCGTGGG GAAGCTCTCA GCTTGGCAGA   3840

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TTAAAGCCTT GGCAGGTTTC TACTATGTGG AGAGTGATGG CCAGGTTTAT CAAACACGCG   3960

CGCGTGGGAA TTTCCGTAAA AAAGGCCATA CCCCTTATGT TGGGGACTGG GTAGATTTCT   4020

CTGCCGAGGA AAATTCAGAA GGCTATATCC TCAAAATTCA CGAACGGAAA AACAGTCTGG   4080

TTCGTCCGCC TATTGTCAAT ATCGATCAAG CTGTAGTAAT CATGTCCGTC AAGGAACCTG   4140

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CCATTGTCTA TATTTCCAAA ATGGATTTGT TGGAAGATAG GGGAGAACTG GATTTTTACC   4260

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AACTTTGAAA TCGAAGTGGA TGGTGGGATT GATGACCAAA CTATTGCTCA AGCCAAAGAA   5340

GCCGGTGCGA CTGTTTTTGT AGCAGGTTCC TATGTCTTTA AGGGAGAAGT CAATGAGCGA   5400
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1002

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GTACAAACTC TCAGAAAACA ACTGGACTAG GGTTGCAGTT TTTGCAGGCG GAAACCGCGG      5460

TCATTATCGG ACAGATTTTG ATGCTTTTGT TGGGGTGGAT CGAGGCTCGC TCTGGGTCTT      5520

GGAAGAAGAC TTACCTCTTG CTCTAGCAGT CGGAGATTTT GATTCTGTGA CGGAAGAAGA      5580

GCGACAGGTG ATTCAAAAAG GTGCCCAGTA TTTTGTCCAA GCACGACCAG AAAAGGATGA      5640

TACAGATCTG GAATTGGCTC TCTTAACCAT CTTTGAACAA AATCCTCAGG CTCAGGTCAC      5700

TATTTTCGGT GCCTTGGGTG GCCGTATTGA CCATATGTTG GCCAATGTCT TTCTGCCTAG      5760

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AAAGTTTACT TATTCTATTA TTAATTGCCA ATCTAGCTGG TCTCTTTCTG ATTTGGCAAA      6120

GGCAGGATAG GCAGGAGAAA CACTTAAGTA AGAGCTTGGA GGATCAGGCA GATCATTTGT      6180

CAGACCAGTT GGATTACCGC TTTGACCAAG CCAGACAAGC CAGCCAGTTA GACCAAAAAG      6240

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CGGTCTTCTT TGATGATTTG AGACGGGAAG AACAGATTAT TGTTGCAGGA CCAAGTACCC      7020

TATCAGCCCT TCTTAACTCC CTATCAGTTG GTTTCAAGAC CCTTAATATC CAAAAGAGTG      7080

CCGACCATAT CAGCAAGACT CTTGCCAGTG TCAAGACCGA GTTTGGCAAG TTTGGTGGTA      7140

TTCTGGTCAA GGCACAAAAA CATCTCCAAC ATGCCTCTGG CAATATTGAT GAATTATTAA      7200
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1003

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ACCGTCGTAC CATAGCTATC GAGCGGACGC TCCGTCACAT TGAGTTGTCA GAAGGTGAGC        7260

CTGCGCTTGA TCTACTCCAT TTTCAAGAAA ATGAGGAAGA ATATGAAGAT TAGTCACATG        7320

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CGAGCTGGGA AAAACTACCT AGCCTTTACC TTCCAAGATG ATAGTGGCGA GATTGATGGG        7440

AAGCTCTGGG ATGCCCAACC TCATAACATT GAGGCCTTTA CCGCAGGTAA GGTTGTCCAC        7500

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CTGCCTCAAG CTGGTGAACC CAATGACCCA GCTGATTTCA AGGTCAAGTC ACCAGTTGAT        7620

GTCAAGGAAA TTCGTGACTA CATGTCGCAA ATGATTTTCA AAATTGAAAA TCCTGTCTGG        7680

CAACGGATTG TCCGAAATCT CTACACCAAG TATGATAAGG AATTCTACTC CTATCCAGCT        7740

GCCAAGACCA ACCACCATGC CTTTGAAACG GGCTTGGCCT ATCATACGGC GACCATGGTG        7800

CGTTTGGCAG ACGCTATTAG CGAAGTTTAT CCTCAGCTCA ATAAGAGCCT GCTCTATGCG        7860

GGGATTATGT TGCATGACTT AGCTAAGGTC ATCGAGTTGA CGGGGCCAGA CCAGACAGAG        7920

TACACAGTGC GAGGTAATCT TCTTGGACAT ATCGCTCTCA TTGATAGCGA AATTACCAAG        7980

ACAGTTATGG AACTCGGCAT CGATGATACC AAGGAAGAAG TCGTTTTGCT TCGTCATGTC        8040

ATCCTCAGTC ACCACGGCTT GCTTGAGTAT GGAAGCCCAG TCCGTCCACG CATTATGGAA        8100

GCAGAGATTA TCCATATGAT TGACAATCTG GATGCAAGCA TGATGATGAT GTCAACAGCT        8160

CTTGCTTTGG TGGATAAAGG AGAGATGACC AATAAAATCT TCGCTATGGA TAATCGTTCC        8220

TTCTATAAAC CAGATTTAGA TTAATAATTT AAGAAAAATG AGCATTTTTT AGGATAAGAA        8280

TGTTCGTTTT TTTATGTGAA TATGGTATAA TAAGTAAAAG ACAAAAATGA ATACTCTTCG        8340

AAAATCTCTT CAAACTAGGG TAGTATCGCC TTGTCGTATG TATATATGCA GGTATATTAC        8400

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TTCTAGTTTG CTTTTTGATT TTTTGAATAA AAATGGAATA GGAAATAGAA ATGAAATTAA        8520

GAAGAAGTGA TCGGATGGTT GTCATTTCCA ACTATTTGAT TAATAATCCT TATAAACTAA        8580

CTAGTCTCAA TACTTTTGCT GAAAAGTATG AGTCTGCTAA ATCATCCATC TCAGAAGATA        8640

TCGTCATTAT CAAACGCGCC TTTGAGGAAA TTGAAATCGG TCATATCCAG ACAGTGACTG        8700

GGGCTGGCGG AGGTGTCATC TTCACACCGT CTATTTCGAG TCAGGATGCT AAGGAAATGG        8760

TTGAAGACTT GCGTACCAAG TTGTCAGAAA GTGACCGTAT CTTGCCAGGT GGTTATATCT        8820

ATCTGTCTGA TTTGCTTAGC ACACCAGCCA TCTTGAAAAA TATTGGTCGT ATTATTGCCA        8880

AAAGCTTTAT GGACCAAAAA ATTGACGCGG TTATGACCGT AGCAACTAAG GGTGTGCCAC        8940
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1004

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TTGCAAATGC AGTTGCCAAT GTCCTCAATG TCTCTTTTGT CATTGTGCGC CGTGACCTGA      9000

AAATTACCGA AGGTTCAACT GTTAGCGTCA ACTATGTTTC AGGTTCAAGT GGTGACCGTA      9060

TCGAGAAAAT GTTCCTTTCA AAACGTAGTC TTAAGGCAGG CAGCCGTGTC TTGATTGTGG      9120

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GCTTTAAGGA ATATTTTGCA GTTAAGGCTA CTCCAACTCC AGCTATTTTG AAAATTCTCC      9600

AAGAAGAAGG TTGTGGTGTG GACTGCTCTA GTTATGTAGA GCTTTTGATG AGCCATAAAC      9660

TGGACTTTCT GGGTTCTGAG ATTATGTTCT CTTCCAACAA CACGCCAGAC AAGGAATACG      9720

CCTATGCACG TGAATTGGGT GCGACCATTA ACTTGGATGC CTTTGAAGAT ATTGAACATC      9780

TGGAGAGAGT AGCAGGCATT CCAGAAATCA TCTCTTGTCG TTATAATCCT GGAGGCGTTT      9840

TTGAACTGGG GACAGACATT ATGGACAATC CTGGGGAGGC TAAGTTTGGC ATGACCAAGG      9900

ACCAGCTCTT TGAAGCCTTT GCTATCTTGA AGGAAAAAGG AGCCAAGACT TTTGGGATTC      9960

ACTCCTTCCT AGCGTCCAAT ACCGTGACCC ATCTCTATTA TCCAGAGTTG GCTCGTCAGC      10020

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TCAAGATTTT CACCGAATTG GGTCGTTTTA TGCTGGCACC TCACGGTGCT CTAGTCACAA      10260

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CAGTTAATCG CGAACTGCCT CATACAGAAA TCGGTGATTT GCTGGTCATT CATGATACAG      10500

GTGCCCACGG ATTTTCAATG GGCTACCAGT ATAATGCCAA ATTACGTTCT GCGGAAATCC      10560

TCTATACCGA AGAAGGTAAA GCCCGTCAAA TCCGCCGTGC AGAGCGCCCT GAGGACTATT      10620

TTGCAACCTT ATATGGCTTC GATTTTGAAG AATAATCTGA TAATAGATTG AAAATGAAAT      10680

TGAAAAACAG ATTGCTTTCT AAAAAATAGG CAAAAATCTT GTTTTTCCTT CAAGTCGTGA      10740
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1005

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TATAATAAAA CTATAAAACG TTTTCAAGGA AGGTAACGAT ATGTCTGAAG AAACAATTGA      10800

TTATGGACAA GTGACAGGAA TGGTGCATTC GACAGAAAGC TTTGGGTCAG TAGATGGGCC      10860

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CCCAGACACT TGGGCTATGG AGTCCAATAA GTCACGTGAA CGGACGGTAG ATGATGTCTT      10980

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AGGAATCCAC TGTACCTTGG ACACCTGTGC TCTTCCTTTC CGTAATAAAC CACGTTACCT      11160

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TGATAAGTTT GAAATTCTAC CTTATCACAC CATGGGTGAG TTCAAGTGGC GTGAACTTGG      11460

AATTCCATAT TCCCTCGAAG GAGTCAAACC ACCAACAGCA GATCGCGTCA AGAACGCTAA      11520

ACAACTCATG GATACCGAAA GTTATCAAGA TTATATGAAA CGTGTACATG GATAGAAAAG      11580

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AACGATATAG TTGACGATAA ACTGTTGGAG AATCATCATG AAACCACCGA CAACCCAGTA      11880

AAGTGTGACA CTAGCTGGTG AGAAGAGGGA GAAGACGACG ATCATGAGTG GGCTCATGTA      11940

AATCATTTTC TTGATTTGTT CTCTTTGCAT TTCATCTTCT ACTCCGTGAA GTGAAAGGAG      12000

CGATTGAAGA TAGTAAAGGA CACCAGCACA GGCAACCAAA ATCATACTTG GAGAACCTAG      12060

AGGAATGCCT AGGTAGCTTG CTTGAGCAAC CCCTTCAGTA TGTTGGGCAG CAAAGTAGAT      12120

AGCAGAGAAG AAAGGCATTT GAAGGAGGAT AGGGAAACAT CCTACACCGC CAAACATGCT      12180

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AGTAGTCGCT TCTTTGAGAC GCGTTTGGTG TGGCTCAAGG ACGTGCTTGA GGGCGTTCAT      12300

CTTTTCAGAG TGAAGCGTTG CCTTCCATGA TTGGTAGATA CCAAGTGGTA AGATAATCAA      12360

GCGTACGATA ATGGTTACGA TAATGATAGC GACACCAAAG CCTAGACCTT TATCAGTAGC      12420

GAAGTACTTG ATGGCTTCAG CCATAGGCGC TCCGATCGTA TTCCAAATAA ATCCTGTTGG      12480
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                                    1006
    CTGACCTGTG GTTTTATCGA CATTGACACA GCCAGTCAAG ACAAGCAACA TAGCCACTCC   12540

    CATAGCCGAG AGTGCAAAAT CGGGGT   12566

    (2) INFORMATION FOR SEQ ID NO: 150:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 5238 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 150:

    TGACACTCTG TAGGATTGTC GTTAATTGAT TGCTCGTACT CTCTACAATA ACCACCAAAG   60

    TAAAAACGAC ATAGAAAGAT AGCATCAGCT GTAGCCATAG CGCCTTTGAC ACCTTCTGGA   120

    TGATTATGAG TTACCTCTGC AGAAAGACTC GTAAGTCCTC TAGATGATGG CCATATACCA   180

    GTTTTCGCAT AAAAACCACA GTCCATGATC CAAGCACATG GAGAAATACG CATAGCTGAT   240

    CCATTCCCAA AGCTATTATA AGGCTCACGG TTATCGCTGT TTAGCCATGC ATTAAACCGA   300

    GCACCGTAAT CAGCATTCGG ATACATTCTG CCATATTTCT TCATCGCGTC AATGAAGTCA   360

    TCTTTTTGTC CACCATTCAT AATTGCTTCT GCAACAGCAC AGGTCATAAC CGTGTCATCT   420

    GTAAAAAAGC AGTCCTTCCG AAATAAAGGA AAGTCCTTTG TTTTGATATT GTTCCATTCG   480

    TAAACAGAAC CGACAATATC TCCAATAATT GCTCCAAGCA TCAGATTCCT CCTTGTTCAT   540

    TTTGATGCTT TTTATATTGG TTATCTACCA TATTTATTTT AGAAAATAAC ATCCTGTTGG   600

    ATTTTAAAAA TTTCATTTTT TTCAAAATAG GGTTTTACCA TTTCTTTCCA CCTAGCTCTA   660

    TGAAAATTGA TTGATTTTAA AGGAGATAGG CCATAATTTC CCAATGCATA ACCATCATTT   720

    ACTTCAACAA CAAGTGTTCT GCCATCGCGA GTAACACCGA TATCTAGTCC ATAAGCTATT   780

    GGCGCATCTT TCCAACATGA TATCGCTTCA TCAATTACAC TTGCATCAAA TTGTGCATGA   840

    TAATCACCTG TATAGGGTCG AACATCTAAT ACGCGACCAT CTAACACAAA ACAACGCCAT   900

    TCAGCTATGA ATTCTACAAC CTCACTAATC CATATAGGAT AGTCGAAAGG TAGACCAATA   960

    CCTATTAAAT CATGGGTTCC ATTAACAACT CTTCCAGTAA AGACTTTTGA ACCAGCTTTA   1020

    GGCTTAATAA ATTTTCCCCA ATTATCAGGT ATATTCACAA TCTCTCCTAA AATACCAGCA   1080

    TAAATCTTTC GACCATAAAA CTCTTTAAGC TCAATAGGAT AGTCATGAAC CGGAACGTTT   1140

    AAGCCCATCA TTTTTAGTAA TGCTCTAGTC TCCATTATAT AATCTACAAC TATATCTTCA   1200

    CTTGTTAACT CTTTTATTTC AGAAAAAGAT TGATATAAAA TAACTTCTTC TCCTTGTAAG   1260

    TAGGCACCTA CTTGAGCATT GTATTTATTA ATTGAAACCT CACTTGGTAA TTTACTTTGT   1320

1007

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CTAATATAAA CAACCATTTC ATCACTCCTA TATCACTAGT GTTACACCAA TTTGTAAAAA   1380

ATAATAGCAA TTTTGCTCTT ATTTTTTTGA GTAAATAGCC CCCATAATAT CATCGAAATA   1440

ATCAACGGTA TTTAGGAGTA ATTCAATAAC CTGGGACTTT GTTAGTCGCA TTCCCCTTCT   1500

ATCTCTAGCA TCTTCTACTA AATTTTCAAG TTTCTCTAGA TTTTTATCAT CCAAGCTAAT   1560

CATTATTCTA TTTTTATCGG TTGCCATTTT CATCACCTCA AGTTAATTCT ATCACAGGTG   1620

TAACACTAGT GTCAACTGGC TTTTATAATA CATTAGTTTA AAAGTGGAGA GGATTTTTAA   1680

CACAGTAACT TTAAATCTTT GGTATTAAAA AATTTTCACA ATATTTATAG AAATAAAATC   1740

TGTCTCAAAT CAGTTATCAA ATCTAGTATA AATTATGAGC GGCTACTCTA ATACTTTCCC   1800

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TGACTCTTTT ACTAGCAAAG GTATATACTC ACAAGGAACT TTGGTTGACT ATTGAATCTC   1920

TCCAACTTCT TCTTTAACAT ATCCTTCTAC ATCTTCAATC TCTACAAACA TTGGGTCTAA   1980

GTGACACAAG AAATGCCAAA CTTCGATCCC TTTTTTTCTG TAAAGAATCG CTTCACCGTC   2040

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AACAATATTT CCGTTAAAAA TAATTTCCAT ATAATCCGGT ATGTTTTTAG GATTAAAATA   2340

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TTTATAGAGC TTATCAAAAT AGATCAGAAC CTTATATATG TTATCTCCTG TAAGCTTTTC   3000

AGCTTCAATA GTCTGTTTCT TTGCTTTCGC ATCAATTAGT GATGATTCTA ATTCATCTAG   3060
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1008

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TTTGTCATAC ATACGATATA GTCTATCATC TAAATCCTGT TTCCTTCTCT TATAATGCTT    3120

ATCTTCAACA TCTAAATTAT CTATTTCCTC AATTAGCTTA AACTTTGTAG AATGACTCTT    3180

TCTCAATTCC TTTTGGTAAT TATCTATTTC TTTTTCTATT TCAGAGGTAT CCACCTTCAT    3240

GTTGATTTTT TCTTGCATCA TAGAAGCAAA TTTCGGATTA CTTACTATCT TGACAATCAC    3300

CTCTGCAACA GCATCATCTA ACAATTCTTC TCTAATTTGC TTACTGAATG TACACTTATT    3360

ACCTCTTATC ATCTGCCTAT GGTTACAACC ATAGTAATAA AAATCTTTAT ACTTTGTGCC    3420

ATCTTTCTTT TTCTTGATAC ACTTGTTCCC AAACATTCCC ACTCCACATA TCGGGCATTT    3480

TACAATTCCA GAAAGCAAGT GTGTGCGTGT ATCTTTTCCT TTATTCACAT GCTCATATTT    3540

CTTTGCTTGA GATTTTAGCT TAACCTGAGC AGCTTGCCAA ACTTCATCGG AAACTATAGC    3600

TTCATGTATC CCTTCAGATA TTAGATATTC ATCTTGTTCA ACCTGCTTAT ATTCATTTCT    3660

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ACCTCCTCTA AAGTTTTATA TCTAATAATT ATTTGTTTAA TTAAGTTTTT TGACATTGAC    4740

AAGTGCTTTG GATTAGCAAC ATAGGAATCT CACTTCCGCC TCTATTCCGG ATGAGCCGGC    4800

TTCAACCTTA GAAGTATCAT TACCCTCATT TTCTTCATAG CGGATAGGGT ATCCCTCCCT    4860
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1009

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ATTATTCAGC CGAAAGATCT TGACGGATAG GTTATTACGC TCCAAAAATA ATTAACGTCT      4980

TGTCTTGGTC TATTCAATTG TTAAGGTTCA AAATTTATCG AGAGTTATTA ATCTTTTTAA      5040

AATTTGACCA TCAGAAAATA TTTATCTTGA TGTAACAAAA TTCTATAAAT TACCCTCTTA      5100

TACTTAACAG TGAAAGAAG TCTTTCTTGG TAACCAATTT TGAAATAGAA TTTGCTTATA       5160

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TCATCTAAAA GTCTTCTA                                                   5238
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(2) INFORMATION FOR SEQ ID NO: 151:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 13425 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 151:

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GACATCGTCT GGTTGACATT GGTCAAAATA GAACAAACCA AAACGACTCG TTCTATACCT      180

CCAACCTTTC AAATGCATCT CATGTAAATG TTCTTCTTCC TTGTCCAAAT CAACAATGGT      240

GAAAATCCGA AATTCTACTC TGCTATTCAT TGTCTTACCC CAAAATTAGA AAACATGCCT      300

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TCTGAATCGC AAAAACTATC AATAAAACCC AATCTATTAT GAAAATCAAA AACACTTTCC      420

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ATACTTTCAA AATGTTTAAA TGTGATTATT TATTTTTGAA AAATAGATCA CCAGCCCGAC      660

TGAAAGTGCT TATAGAATGA TAATAAGTCG CCTGCCGAAA ACAGCGAAAA ATAGCGGTGT      720

TATGCGGAGA TAATCTGACG CGATGCGAAA GTATATTGCA TACTTATTTT CAACAATTTA      780

GCAGAGTATT TTTATAAGTG TGATATAATA GAAGTATAAT TTGTTCTGAT AGTTTATTTT      840

ATGGAGAAGT AGATTTTTAG AATGCGGAGG GTTCAATATG GTTGAGTTTA TAAAGTCTAA      900

GAAAGAAATG AGTGAGGAGG ATATTAAAGC AAATTTCATC ACTCCTGCTA TTGTATCCAA      960
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                                      1010
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AGTTAGAGGA GATAAGGCTC GTCGTAAAGA AGGAAAAAAA TCAGACTATT CACTGTATTA      1080

CCAATTTGGA ACTCGAATTG CAATTGTTGA GGCAAAGGAT AATAAACACA GCGTTCGAGC      1140

AGGATTACAA CAAGCTATTG AATATGGAGA GATTTTAGAT GTTCCATTTG TTTATTCTTC      1200

GAATGGTGAT GGCTTTATTG AACACGACCG TATCACGAGA GAAGAACGTG AGCTGGAGTT      1260

AGACGAATTC CCTACTCGTG AAGAATTATT TTCTCGTATG ACGAAGGAAA AAGGATTGAC      1320

GTACGAAATT ACAGAAGCTA TCTCAACTCC ATACTATACA GACGCCTTCT CAATGAAAAC      1380

GCCACGCTAT TATCAGCAAA TAGCTATCAA CCGTACTATT GAAACAGTTG CCAGAGGACA      1440

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TTTAGATGTG GATGTGGATG GTTATCGTCC AGAAACTGGA AAAGTTGATG CTAACGGACA      2040

ATTAATAGAA GATAGGTACT ACGGCAGGAA AGATTTTGAT AAAACCATTG TCATTGATGA      2100

TAGAACGCAA AGAGTTGCCA AGTTTGTTTC TGATTATATG AAGCAAAACA ATGCACGATT      2160

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TGAAAACGGG AAACTGATTA CCGAAAGCCT GACCGACTAC ACTCGAAAGA ATATCTTAGG      2760
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1011

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TATCTTAGAC GAACTTTATA AAAAAGGAGT TTATCTAGAT GCTATTCGAG AGTCGGAGGG     2880

AATATCAGAA CAAGAAATCG ATGATTTTGA TTTACTCCTA AAACTTGCCT ATGGTCAAAA     2940

AGAATTAACC AAAACGGAAC GTATCAATAA ACTCAAACAA AGCGGATATT TATATAAATA     3000

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CTTCAAAATC ATCAATACTT ATTTTGGAGA TAAAAAACGA TATTTACAAG CAATTAAAGA     3180

ATTGGAGCAA GAGCTATTTA CAGTAGCTTA ATGAAAGGAA AGTATGTCAA TTACATCATT     3240

TGTAAAAAGA ATTCAAGATA TCACTCGAAA CGATGCTGGT GTTAATGGTG ATGCTCAACG     3300

TATTGAGCAA ATGTCTTGGT TATTATTCTT AAAAATTTAT GATAGCCGTG AAATGGTTTG     3360

GGAATTAGAA GAAGACGAGT ATGAGTCAAT TATCCCAGAG GAATTAAAAT GGCGAAATTG     3420

GGCTCATGCT CAAAATGGGG AACGGGTATT GACAGGCGAT GAATTACTTG ATTTTGTCAA     3480

TAACAAGTTA TTCAAAGAGT TGAAAGAGCT TGAAATAACT TCAAATATGC CTATTCGAAA     3540

AACGATTGTT AAATCAGCTT TTGAAGATGC GAACAACTAT ATGAAAAATG GCGTCTTGTT     3600

ACGCCAAGTC ATCAATGTTA TTGATGAAGT TGATTTCAAT AGCCCTGAAG ATCGTCATTC     3660

GTTTAATGAT ATTTACGAAA AAATTCTTAA AGATATTCAA AATGCTGGGA ACTCAGGAGA     3720

ATTTTATACG CCACGTGCAG CGACTGATTT TATTGCCGAA GTTCTTGACC CAAAACTTGG     3780

AGAATCAATG GCAGACCTTG CTTGCGGAAC AGGAGGCTTC TTGACTTCGA CTCTGAACCG     3840

TTTAAGTAGT CAACGTAAAA CTAGTGAAGA TACCAAAAAA TATAATACAG CTGTTTTTGG     3900

TATTGAAAAG AAAGCATTTC CTCATCTTTT AGCAGTTACA AATCTGTTTC TTCACGAAAT     3960

TGATGACCCT AAAATTGTTC ATGGAAATAC TTTGGAGAAA AATGTTCGTG AATATACGGA     4020

TGATGAAAAA TTTGACATTA TTATGATGAA TCCACCTTTT GGAGGGTCAG AATTAGAAAC     4080

AATAAAAAAT AACTTTCCAG CAGAATTACG GAGTTCTGAA ACAGCTGATT TATTTATGGC     4140

TGTCATTATG TATCGTTTGA AAGAAAATGG TCGTGTTGGA GTTATTTTAC CTGATGGTTT     4200

TCTATTTGGT GAAGGTGTAA AAACTCGCTT GAAACAAAAA CTGGTAGATG AGTTCAACTT     4260

GCATACGATT ATTAGGTTGC CTCATAGTGT CTTTGCACCG TATACAGGAA TCCATACGAA     4320

CATTCTTTTC TTTGATAAAA CAAAGAAAAC AGAAGAAACT TGGTTTTATC GTTTAGATAT     4380

GCCAGATGGT TATAAAAATT CTCGAAAAC TAAGCCGATG AAGTCAGAAC ACTTCAATCC     4440

TGTTCGTGAC TGGTGGGAAA ATCGTGAAGA GATTCTGGAA GGTAAGTTCT ACAAATCTAA     4500
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                                        1012
ATCATTTACA CCTAGTGAAT TGGCTGAGTT GAATTATAAT TTAGACCAGT GTGACTTTCC      4560

AAAAGAGGAA GAGGAAATCT TAAATCCCTT TGAGTTGATT CAGAATTATC AAGCGGAAAG      4620

AGCAACTTTA AATCATAAGA TTGATAATGT ATTAGCTGAT ATTTTGCAGT TGTTGGAGGA      4680

CAAATAATGA CACCAGAACA ACTTAAAGCA AGTATTCTCC AAAGAGCGAT GGAAGGGAAA      4740

TTAGTGCCGC AAAATCCCAA TGACGAACCT GCAAGTGAAT TATTAAAGAG AATTAAAGCT      4800

GAAAAAGAAA AACTTATCAG TGAAGGAAAA ATCAAACGAG ATAAAAAGGA AACTGAGATA      4860

TTTCGTGGTG ATGATGGGAA ACATTATGGG AAGTTTGCTG ATGGAAGCAC TCAAGAAATT      4920

GATGTTCCTT ATGATATTCC TGATACTTGG GAGTGGGTGA GGTTTTCTAC ATTGGTTGAA      4980

ATTGTCAGAG GTGGCTCTCC ACGACCAATC AAaGATTATC TTACTTCTGA AGTAGATGGA      5040

ATAAATTGGA TAAAAATAGG TGATACTGAA AAGGGTGAAA AGTATATAAA TAATGTTAAA      5100

GAAAAAATCA AAAAATCAGG GCTTAACAAA ACTAGATTTG TAAAAAAAGG TACATTTTTG      5160

TTAACTAATT CTATGAGTTT TGGTAGACCT TATATTTTGA ATGTTGATGG TGCAATACAC      5220

GATGGATGGT TGGCTATTTC GAACTATGAA AACTCATTAA ATAAAGATTA CCTATTCTAT      5280

ATTCTTTCAT CAAATGTAGT TTATTCTCAA TTTCTATCTC TAATTAGTGG AGCTGTTGTG      5340

AAAAACTTGA ATAGTGATAA AGTTGCTTCT ATTCTTATCC CTCTCCCCCC ACTATCCGAA      5400

CAACAACGAA TAGTAGAAGC AATCGAATCA GCTTTAGAAA AAGTAGATGA ATATGCTGAA      5460

AGTTATAATA GACTAGAACA GCTAGATAAA GAATTCCAG ATAAACTAAA AAAATCTATT      5520

CTTCAATATG CTATGCAAGG AAAAATTAGTT GAACAAGACC CAAATGATGA ATCAGTCGAA      5580

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AAGAAAGATT TGGACATTTC TATTGTTTCC CAAGGAGATG ATAACTCTTA TTATGGGAAT      5700

ATACCTATGA ATTGGGTTGT TATAAAAATA AAAGATATTT TTTCAATAAA TACAGGTCTT      5760

TCTTACAAGA AGGGCGATTT AAGCATTAAT AATAAAGGTG TTAGAATTAT ACGTGGTGGT      5820

AATATTAAGC CTTTAGAATT TTCTCTGTTG GATAATGATT ACTACATTGA TACACAATTC      5880

ATCTCCTCTG AGCAAGTTTA TTTAAAACAT AATCAGCTAA TAACACCTGT ATCAACCTCT      5940

TTAGAACATA TTGGAAAGTT TGCAAGAATC GATAAAGACT ATGATGGTGT TGTGGCTGGT      6000

GGATTTATTT TCCAATTAAC ACCATTCGAA AGTTCAGAGA TTATTTCAAA ATTTCTATTA      6060

TTTAACTTGT CCTCTCCGTT ATTTTATAAA CAATTGAAAG CAATAACTAA ACTATCAGGT      6120

CAAGCTTTAT ATAATATTCC TAAAACTACA CTGAGCGAGC TATTAATTCC GTTAGCTCCT      6180

TTTGAGGAAC AGGAACTTAT TACTCAAAAA GTTGAGAAAC TTTTTGAAAA AGTAAATCAA      6240

CTTTGAAAAT GATTCTTTTC ATCTCTTCAT GATTAGAAAT AGGGATTAAT AATTCGGAGA      6300
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1013

TACTGGTACT	ATTTAATGTT	TTCCCTTTGA	TAGCATCTTT	TGAATCACCT	AAAGTAGAGA	6360
TAAGTGGCAA	AAATATCATT	AAGTAATCTC	TGATAATATT	TTCTTTATTA	GCATAGGGGA	6420
ATATCGATAT	AATGGCTTCA	TTATGAGTGG	CAGGAATATC	CAATATGGCA	ACTTTTCCAA	6480
TAGATAATTT	AAAACTCATT	AATAAAGTTC	CTTTAGGTGA	AATGTCTATT	TTCTTTGATT	6540
TTAATGCTAA	TTTAGAAATA	GATTCTCTCG	CATTAGTTAC	ATAACCAGAT	ATAGGCATAT	6600
CTGATATAGA	TACCCAAGGT	ATTTCAGTTC	CCCAAAAAGT	AGCTTCACTG	CGTGGAGGAG	6660
TTTTTCCTAT	TCTGAAGTTA	ACTAGGCTAG	CAAATTTAAT	ATATCTCCAT	GCTTCTGGGA	6720
TTTCATATAT	AGGATAAGAG	GTTGTTTCGT	CTTTGTTCCC	ATAATAAGAG	CCATAATCAC	6780
AAAAATAGCA	GGTAGTCAGT	TTGACCACCT	GTTATTTTTT	ACCAATTAAC	AATTTTATCT	6840
ACAATATTTT	GTTGTTCAGT	AGCTGTTTTC	CTTAGATAAA	TTCGAGTAGT	TTCTATACTT	6900
TCGTGTCCCA	TCAAATCTGC	AAGCAAGGCA	ATATCATTAT	ACTTCGCTAA	AAAATTCTTA	6960
GCAAATAAAT	GCCTAAAAGA	ATGAGGGTAA	ATTACGTTAG	GATTCATTTT	GTATTTATCA	7020
GCATAATTTT	TTAACTGTTG	AGCAACTCCT	CTTGCTGTAA	TTGGTTCGTT	AAATTTATTC	7080
AAAAATAAAT	AACCACTTCG	GCGATTTTCT	GATTCTAACC	AACTAAGACA	ACTATTTCTT	7140
AATTTTTTAG	GAATGTACAG	TCTACGAATT	TTACCACCTT	TTGAGTAAAT	GTCAAAATAA	7200
CCGATTTCTA	CATGCTCTAC	TTTTAGTTTA	ATAAGTTCAC	TTACACGAGC	CCCAGTTGCA	7260
CCTAAAAACC	AAACGACAAA	ATGCCATTTT	AAAATACCAT	CTTTTTTCAA	ACTACGTTTA	7320
AGAAAAAGGT	AATCAGCATG	GCTAATGACA	TCTTCTAAAA	ACGGTTTTTG	CTGTACTTTG	7380
ACAAATTTTA	ATTTCAAATC	ATCATGACCA	ATAAAAGCCA	GATATTTATT	TACTCCTTGT	7440
AGTCGCAAAT	TGACAGTTTT	AGGTTTAAAA	TTGTCTAATA	AATATCCTTT	GTATTCAAAT	7500
AAATCTTCCA	TTTTGAGTTC	GTAATTCTCC	AAGAAAAATC	GAACACCATA	AAGGTACGAA	7560
CGCACAGTAT	TTTCAGCTAA	ACCAGCTTTC	TTCAAATGTA	ATTCAAAATC	TTTCAACGTA	7620
AAACTCCTAT	CTTATGTTTG	ATAGAAATTC	CACCGCACGT	AAAACTATTA	TACTAAATTA	7680
GTGCGTCAAT	ATGGGCGAAA	AATTGTTCGA	TTTTATCAAC	GATTCTGGAT	TGTTCAGGAA	7740
GGGGTGGGAG	GGGGATTAAA	TATTCTTTTA	TAGTTTTCGT	TAATAATTCT	TTTTGTTTTG	7800
TACTACCCGA	CGCTTTTTCT	TCAATAACTG	ACTGAACAAT	AGGAGAGGAA	AGAAAATTAT	7860
AGATGAAATG	GCAATTAATA	ACCCCCGATA	AGACTCTTAT	AACTGTAACA	TGGCTATCTG	7920
CAACAGCCCA	GCCATAAGGA	TTTTTATTTT	CATGGTAAAT	AGCTAATCGT	CCTAACGTAC	7980
CTAGACCTGT	TGAATTCCAC	ATTAAATCAC	CATCTCTTAG	TAATCTTTCT	TTCTGGTAAC	8040

1014

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TATGAACTGT TTCGGGATCA ATAAATCTTG CTAAGTCAAT AGAAAAGCCA GACCATTGAT        8100

TACATTTCTG AGCAATCACA GGGTATATAG GAATATTTGA ATATTTTGGA GACTTCCCTC        8160

TTTGAATGTA GGAGGTTATA TCGTTTAACC TCACCCATTC CCAACTTTCT GGTATTTCAC        8220

AAGGTACTTC CTCATAATAA GAGTTATCAT CTCCTTGGGA AACAATAGAA ATGTCCAAAT        8280

CTTTCTTTTT AATCTTGCCT TCTTCAAAGA GTTTTTGTTT TTCTGCTCGT ATTTTTTCAA        8340

GTAAAACTTC GACTGATTCA TCATTTGGGT CTTGTTCAAC TAATTTTCCT TGCATAGCAT        8400

ATTGAAGAAT AGATTTTTTT AGTTTATCTG GAAATTCTTT ATCTAGCTGT TCTAGTCTAT        8460

TATAACTTTC AGCATATTCA TCTACTTTTT CTAAAGCTGA TTCGATTGCT TCTACTATTC        8520

GTTGTTGTTC GGATAGTGGG GGGAGAGCAA TTAATAAATAG ATTAAAATTA TAATCATTGA        8580

TTGCAGGATA ACTTGTTCCA GTAGATTTAT TATTAACACG ATTGATAAAA TTATCTGATA        8640

ATAAATAATA TTTCAAATAT GTTTCGTTAA GTAAAGTATC CAAAACAATA AATGCTGTAC        8700

TAGCTATCAA ATACTCTTTA AGTTCTCTAA CTACAGCAAT ATTTTTTAGA TATGGTCTAA        8760

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TGCTTCCATC AGCAAACTTC CCATAATCTT TCTTATGTGC TTCAAGTATA TAAAAAGGCG        9060

TAAAAATACG CCTATAGATA ATGGGGTTGA AATAGGTTTA TTGTTGATGA GATTGTAGAT        9120

AATTCAATTT TTTACTTCCA ATCGAATATT CAAATCCTCC ACCTTTTCTG CCTGTAATTG        9180

TTCATCATAA AATTCAATAT CTTCAGGATT TTCCCCTTGG CAACCTCGGC AGAAATATTC        9240

TTCCGCTCGA TCAGGATTCA AAAATCGACA AGCACAAACA AAACAGTCGC CATCATCATT        9300

TATTGAGATA ATATAGTAGA TTGAAATAAG ATGTAAACAA ATCGATTAGG AAAGTTAAAT        9360

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TCAAATATAT CTTTCGAAAA AATATTTACA GATGTGTAAT TTTGAAGCTT GCAAAAGTTA        9480

GTAAACTTGT AGATTCGAT TTGAAGTAAC TTGTTTTCTT GCCCGATATT GTTTTTGAAA        9540

TTGAATTTTT CCATAGTGAC TCCTTAATTT TCTTCTACAC GTCTGATGAT AAATCTAATT        9600

CGCAAAAGAG TCAAGAGGAT TTTTCGAAAA ATAAATAGCG ACCGAAATCG CTATTTTAAG        9660

GGTTATAGGT ATTTGATGGC TTAGACTGCT GTGTGACTGT TTACCCACAG GCAATCTTTC        9720

TTCTATATTA GTATTAGTAA AGGTCTAAAT AATTATCAAT TTCCCATTGT GAAACGAAGG        9780

TTGCATAACT TGCCCATTCG ATTCGTTTGG CTTCAAGGAA GCTAGTATAG ATGTGATCTC        9840
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1015

CGAGAGCAGC TTTAACCACT TCATCTTCTG TCAAAGCTTT CAAAGCGTTG TGAAGAGTTG   9900

ATGGAAGGTC TGTAATACCA GCTTCCTTGC GCTCTTCTGC TGTCATGATG TAGATATTTT   9960

CTTCGATAGG AGCTGGTGCT TCGATTTTAT TTTCAATACC ATACAAACCA ACTTCCAAAA   10020

GAACAGCCAT AGCAACGTAA GGGTTCGCCA TTGGATCCAC TGAACGCAAC TCAAGACGAG   10080

TTCCCATACC ACGTGAAGCA GGTACGCGCA CAAGTGGCGA ACGGTTACGA CCAGCCCAAG   10140

CAATGTAAAC AGGCGCTTCA TAACCTGGAA CCAAACGTTT GTATGAGTTA ACTGTTGGGT   10200

TCATGATGGC AGTATAGTTG TAAGCATGCT TGATCAAACC GCCTAGGAAA TGGTAAGCTG   10260

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CCATAAATGT TGCGTAAAGT CCGTGTTTGC GAGCAATGGT TTTAACAACA AGCTTAAAGA   10440

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CAACCGCAAC CTCGTGGTGA CTCGCTTCTA CTTCAAATCC CATTTTGGTC AAGACATTCA   10560

CAATCTCACG ACGTGTGTTG TCCGCAAGGT CAGTAGGTGC CAAGTCAAAG TAGCCACCCT   10620

TGTCATTCAC TTCAAGTGTT GGGTCCCCAT TTTCATCCAA CTTAAATAGG AAGAATTCTG   10680

GCTCTGGACC AAGGTTGAAG GATTTGAATC CAACTTCTTC CATGTGACGA AGAGCTCGTT   10740

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TCAGACCTGC AACACTTCCA TTTTCATCTC CCCAAGGGAA GACTGTCCAT GTATCCAAGT   10860

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TATAATCTTT GATTTCAAGC AGACGATCCA TGTCATTCAA GGAATACATG CGACGATTTC   11340

CTTCGTTTCG ATCGGGCTTG ATCAACTCTT GATCTTCATA ATAACGAATC TGACGCGCCG   11400

ATAGATCGGT CAACTTCATA ACACTGCCGA TAGGAAAAAC AGCCATATTT CGGCGAAATT   11460

CTTTTTCCTT CATTTACAAT TTCCTTCTTT CTGTCTATTA TAGTCTAAAA AAAGACAAAC   11520

GTCAATTGAT AATGTTATAA AATGTAACAT TATTTTTCTT TTTTCTCTAA AAAGAGACGA   11580

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                                  1016
ATACGATCAA TATCGTAATT TACGATAATT GCGACAAAAA CTCCCATAAA CGTTTCTAAT    11640

ACACGCACAA ACACGTACAA AATTGTCTCA CCACTTGGAA TTGATAGGGT AATGATTAAC    11700

ATAGCTGCTA CACCACCAAT AACCCCTGCT TTGTTATTCA TGGCTACATT TGTCATAATG    11760

GTTAACATGG TGCAGATTGG AACAACTACC AAGGTCACCC AAAAGGCTTC GTGGAAAAAG    11820

GTATTTAATA AGAAGAAGAC CAAGGCATAG AGTCCACCGA TACTATTTCC TAGAATACGC    11880

GAAGTCCCAA AATGAACACT CTCATCAAAA CTCTCCCTCA GGCTAAAAAC GGCTGTCAAA    11940

GCACCAATTT GAAGACCTTT CCAGCCAAAA AAGCCAAAAA TCAAGAGAAC TAGAAAAACA    12000

GCAATACCTG TTTTAAAGGT TCGCATACCA AGTTTGAACT GGGATTTATC GAATTTATAT    12060

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TTATGAGTAA TAGTTGAGAG GAAGCGTTTT TATTTTAAGC AAAAGAAAAG AGGAACTTTC    12180

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GAGTCAACTG GCAAGATCAA TTTACCATTT GCTTTTTCAA GAAGAGCTTT CGCAACATCC    12660

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TAAGTCATCC CACCACCGAT AAGGACGTTA TCAGCTTTTT CAAGCAAGTT TTCGATAACA    12780

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TCAACGTTTG CTGAGATACC AACGTTAGAT GCGTGTGCAC GGTGAGCTGT ACCGAATGCA    12960

TCGTTTACGA AGATACCATC TCCAAGTGAT GCCCAGTATT TACCAAGTTC AGGATCGTTT    13020

TTAGATTCTT TCTTGCCGTC AACATCTTCG TAACGAGTGT TTTCAACCAA GAGAACTTGT    13080

CCATCTTCAA GAGCGTTGAT TGCCGCTTCT AATTCAGCAC CACGAGTGAC ACCTGGGAAA    13140

ACAACATCTT GACCAAGTTT TGCTGCCAAG TCAGCTGCTA CAGGAGCAAG TGATTTACCA    13200

GCTTTATCAG CTTCTTCTTT CACACGTCCA AGGTGAGAGA AAAGAATTGC ACGTCCACCT    13260

TGTTCGATGA TGTACTTAAT AGTTGGAAGA GCTGCTGTGA TACGGTTATC GTTAGTGATT    13320

ACGCCATCTT TCAATGGTAC GTTGAAGTCA ACACGAACGA GGACTTTTTT ACCTTTCAAG    13380
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1017

TCAACGTCTT TAACAGTAAG TTTTGCCATG TTACAAAAAC TCCGG   13425

(2) INFORMATION FOR SEQ ID NO: 152:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 905 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 152:

GATTTATCCT ACCGGnGAAT TTCCGGAGGG GTTCTAGCAG CAATCTTAGG AATCTATGAA   60

CGAATGATTG GCTTTCTGGC CCATCCCTTT AAAGACTTTA AAGAAAATGT TTTGTACTTT   120

ATTCCAGTTG CCATCGGTAT GCTTCTGGGA ATCGGCTTAT TTTCCTACCC GATTGAATAC   180

CTGCTTGAAA ATTATCAGGT TTTTGTATTA TGGAGCTTTG CGGGAGCTAT TATCGGTACA   240

GTTCCTAGCC TCCTCAAAGA ATCAACTCGA GAATCTGACC GAGACAAGAT TGATTTAGCT   300

TGGTTATGGA CAACCTTTAT CATTTCTGGA TTAGGACTCT ATGCCTTAAA TTTTGTCGTT   360

GGAACCTTAA GCGCCAGCTT TCTTAACTTC GTCCTAGCAG GCGCACTATT GGCCCTTGGC   420

GTCTTGGTTC CTGGCCTCAG CCCATCAAAT TTACTTTTGA TTTTGGGACT CTATGCTCCT   480

ATGTTGACTG GTTTTAAAAC TTTTGATTTC TTGGGAACCT TCTTTCCGAT TGGAATTGGT   540

GCAGGTGCAA CTCTCATCGT TTTTTCAAAA TTGATAGATT ATGCCTTAAA CAACTACCAC   600

TCACGCGTCT ATCATTTCAT CATCGGTATC GTCCTATCAA GTACCCTTTT GATCTTAATT   660

CCAAATGCAG GAAACGCTGA AAGTATCCAA TACACAGGAC TTTCACTTGT CGGTTATGTC   720

ATCATCGCCT TCTTCTTTGC GCTGGGAATC TGGCTTGGTA TTTGGATGAG TCAATTGGAG   780

GATAAATATA AATAATGGCA AAAAAAGTTA AAATCAAAAA AACATTGGTG GAACAAATCC   840

TATCTAAAGC AGCTATCCCT CATCAGGGGA TTCAAATCAA TGCCCTAGAA GGAGAGCTTC   900

CTCAA   905

(2) INFORMATION FOR SEQ ID NO: 153:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 4278 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 153:

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                                      1018
CTTGAATTAA ATAAAAAACG TCATGCGACT AAGCATTTTA CTGATAAGCT TGTTGATCCC        60

AAAGATGTGC GTACGGCTAT CGAAATTGCA ACCTTAGCGC CAAGCGCCCA CAACAGCCAG       120

CCTTGGAAAT TTGTGGTGGT ACGTGAGAAA AATGCTGAAC TGGCAAAGTT AGCTTATGGT       180

TCCAATTTTG AACAGGTATC ATCAGCGCCT GTAACCATTG CCTTGTTTAC AGATACGGAC       240

TTAGCCAAAC GTGCTCGTAA GATTGCCCGT GTTGGTGGTG CTAATAACTT TTCTGAAGAG       300

CAACTTCAAT ATTTTATGAA AAATCTGCCA GCTGAGTTTG CCCGTTACAG TGAGCAACAA       360

GTCAGCGACT ACCTAGCTCT CAATGCAGGT TTGGTTGCCA TGAACTTGGT TCTTGCATTG       420

ACAGACCAAG GAATTGGTTC TAACATTATT CTTGGTTTTG ACAAATCAAA AGTTAATGAA       480

GTTTTGGAAA TCGAAGACCG TTTCCGCCCA GAACTCTTGA TCACAGTGGG TTATACAGAC       540

GAAAAATTGG AACCAAGCTA CCGCTTGCCA GTAGATGAAA TCATCGAGAA AAGATAGAAA       600

GAAGAAAAAA TGACAGCAAT TGATTTTACA GCAGAAGTAG AAAAACGCAA AGAAGACCTC       660

TTGGCTGACT TGTTTAGCCT TTTGGAAATC AATTCAGAAC GTGATGACAG CAAGGCTGAT       720

GCCCAGCATC CATTTGGGCC TGGTCCAGTA AAAGCCTTGG AGAAATTCCT TGAAATCGCA       780

GACCGCGATG GCTACCCAAC TAAGAATGTT GATAACTATG CAGGACATTT TGAGTTTGGT       840

GATGGAGAAG AAGTTCTCGG AATCTTTGCC CATATGGATG TGGTGCCTGC TGGTAGCGGT       900

TGGGACACAG ACCCTTACAC ACCAACTATC AAAGATGGTC GCCTTTATGC GCGCGGGGCT       960

TCGGACGATA AGGGTCCTAC AACAGCTTGT TACTATGGTT TGAAAATCAT CAAAGAATTG      1020

GGTCTTCCAA CTTCTAAGAA AGTTCGCTTC ATCGTTGGAA CAGACGAAGA ATCAGGCTGG      1080

GCAGACATGG ACTACTACTT TGAGCACGTA GGACTTGCCA AACCAGATTT CGGTTTCTCA      1140

CCAGATGCTG AATTTCCAAT CATCAATGGT GAAAAAGGAA ATATCACGGA ATACCTCCAC      1200

TTTGCAGGAG AAAATACAGG TGTTGCCCGT CTTCACAGCT TTACAGGTGG TTTACGTGAA      1260

AATATGGTAC CAGAATCAGC AACAGCAGTC GTTTCAGGTG ACTTGGCTGA CTTGCAAGCT      1320

AAACTAGATG CCTTTGTTGC AGAACACAAA CTTAGAGGAG AACTCCAAGA AGAAGCTGGC      1380

AAATACAAGG TGACGATCAT TGGTAAATCA GCCCACGGTG CTATGCCTGC TTCAGGTGTC      1440

AATGGCGCAA CTTACCTTGC CCTCTTCCTC AGCCAGTTTG GCTTTGCTGG TCCAGCCAAA      1500

GACTACCTTG ACATCGCAGG TAAAATTCTC TTGAACGATC ATGAGGGTGA AAATCTTAAG      1560

ATTGCTCATG TGGATGAAAA GATGGGTGCT CTTTCTATGA ATGCCGGCGT CTTCCACTTC      1620

GATGAAACAA GTGCTGATAA TACCATTGCC CTCAACATCC GCTATCCAAA AGGAACAAGT      1680

CCAGAACAAA TCAAGTCAAT CCTTGAAAAC TTGCCAGTTG TTTCTGTTAG CCTGTCTGAA      1740

CACGGTCACA CGCCTCACTA TGTGCCAATG GAAGATCCAC TTGTGCAAAC CTTGTTGAAT      1800
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1019

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ATCTATGAAA AACAAACTGG CTTTAAAGGT CATGAACAAG TCATCGGTGG TGGAACCTTT     1860

GGTCGCTTGC TAGAACGCGG AGTTGCCTAC GGTGCTATGT TCCCAGACTC GATTGATACC     1920

ATGCACCAAG CCAATGAATT TATCGCCTTG GATGATCTTT TCCGAGCAGC AGCAATTTAT     1980

GCCGAAGCTA TTTACGAATT GATCAAATAA AACGATAGAA GTCTGAGATC TTATGCTTGG     2040

ACTTCTTTTT GGAGGGAAAG TAGATGTCTC AAATCGAAAG AATCAAACAG GCTATCATGG     2100

CGGATTCGCA GAATGCCAGC TATACAGAGC GTGGCATTGA GCCTCTCTTT GCAGCGCCAA     2160

AAACTGCTCG CATCAATATC ATCGGTCAGG CTCCGGGACT TAAAACTCAA GAAGCAGGCC     2220

TTTACTGGAA AGATAAAAGT GGTGACCGCT TGCGGGACTG GCTAGGTGTG GATGAAGATA     2280

CCTTTTACAA TTCAGGTTAT TTTGCTGTTT TGCCTATGGA TTTCTACTTT CCAGGACATG     2340

GCAAGTCGGG TGATCTTCCG CCTCGTACAG GTTTTGCAGA AAAATGGCAT CCGCAGGTCT     2400

TACAGGAATT GCCTGATATT CAGTTAACCC TCTTGATTGG GCAATATGCC CAAGCCTACT     2460

ATTTACAGGA GAAAATCAGT GGGAAGGTAA CGGAGAGGGT GAAACACTAT AAAGACTATC     2520

TGCCAGCCTA TTTTCCGCTA GTTCACCCAT CACCACGAAA TCAAATCTGG ATGGCCAAAA     2580

ATCCTTGGTT TGAGGCAGAA GTAGTGCCAG ATTTGAAAAA AAGAATTAAA ACCATTTTAT     2640

AGTCAATGAA AATCAAAGAG CAAACTAGGA AGCTAGTCGT AGGCTGCTCA AAGTACAGCT     2700

TTGAAGTTGC AGATAAAACT GACGAAGTCG GTAACATACG CACGGTAAGG CGACGCTGAC     2760

GTGGTTTGAA GAGATTTTCG AAGAGTATTA GAAGAAAAG AATGAAAGAA ATAGCCTTTG     2820

ACGCATTTTA CCAGCTTTAC CAAAACGACC AGCTTTCTTT AGTGGATGTG AGAGAAGTGG     2880

ATGAGTTTGC AGCTCTTCAT TTAGAAGGTG CCCACAACCT ACCGCTTAGT CAATTGGCTG     2940

ATAGTTATGA TTAATTGGAC AAAGATCGCT TGCATTATAT TATTTGCAAA TCTGGAATGA     3000

GATCGGCGCG TGCTTGCCAA TTCCTATTAG AACAAGGTTA TAATGTTATC AATGTCCAGG     3060

GTGGCATGTT AGCCTTTGAA GAACTTTAAA ATTTTGCATT TCTCCTACTT GGTGTGGACT     3120

GGGTAGGAGA GTTTTATTTT TAGATAATTC TTATTTTTAA GAAAATTGAA AACATTTAAT     3180

ATTTGCCTCG TGATGCTTTT TTCAGACTCC TAATCGTGGT ATACTAGGTC AGTATTTTAT     3240

AAATATGAAG GAGATTTTTA TGGCTAAAAA AGGTACCCTA ACAGGTTTGC TCCTGTTTGG     3300

AATATTTTTT GGTGCGGGGA ACTTGATTTT TCCGCCTTCT CTAGGTGCTC TATCTGGAGA     3360

ACATTTTCTT CCTGCCATCG CAGGTTTTGT CTTTTCAGGC GTTGGTATCG CCGTCTTGAC     3420

CCTTATTATT GGAACGCTAA ATCCTAAAGG ATATATCTAC GAGATTTCAA CGAAGATAGC     3480

GCCTTGGTTT GCGACTCTTT ACCTCTCAGT TCTTTACTTG TCAATCGGTC CATTCTTTGC     3540
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                                   1020
      TACCCCACGT ACTGCTACAA CAGCTTACGA AGTAGGGATT AGCCCCCTTT TGTCGGATGC      3600

      AAATAAAGGA CTTGGCTTGA TTGTATTTAC GGTTCTGTAT TTTGCGGCAG CCTATTTGAT      3660

      TTCGCTTAAT CCATCAAAAA TCTTAGACCG CATTGGACGT ATTTTAACGC CAGTCTTTGC      3720

      AATTTTGATT GTTATCTTGG TCGTTCTGGG AGCTATCAAA TATGGTGGAA CAAGTCCTCA      3780

      AGCTGCTTCA CTGCTTATCA AGCTTCTGCC TTTGGTACAG GTTTCCTAGA AGGTTACAAT      3840

      ACCTTGGACG CCCTTGCCTC AGTGGCCTTT AGCGTAATCG CAGTTCAAAC CTTGAAACAA      3900

      CTTGGATTTT CAAGTAAGAA AGAATACATT TCAACTATTT GGGTTGTTGG TATCGTTGTT      3960

      GCCCTTGCCT TCAGCGCTCT TTACATCGGT TTAGGTTTTC TTGGAAATCA TTTCCCAGTA      4020

      CCAGCTGAAG CGATGAAGGG TGGAACACCA GGTGTTTACA TCTTGTCACA AGCCACTCAA      4080

      GAAATCTTTG GCTCAACAGC TCAACTCTTC CTTGCAGCTA TGGTTACCGT AACCTGCTTC      4140

      ACAACGACTG TTGGTTTGAT TGTGTCAACA GCTGAGTTCT TTAATGAGCG CTTCCCACAA      4200

      ATCAGCTACA AGGTTTATGC GACAGCCTTT ACCTTGATTG GATTTGCTAT TGCCAATTTG      4260

      GGTCTTGATG CGATTATC                                                    4278

(2) INFORMATION FOR SEQ ID NO: 154:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 1953 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear


        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 154:

      ACCCGATCAA ATGACAAAAG CTAACTTTGG TGTCGTAGGT ATGGCCGTAA TGGGTCGTAA      60

      CCTTGCCCTT AATATTGAAT CTCGTGGTTA CACAGTTGCT ATCTACAACC GTAGTAAAGA      120

      AAAAACGGAA GATGTGATTG CTTGCCATCC TGAAAAGAAC TTTGTACCAA GCTATGACGT      180

      TGAAAGTTTT GTAAACTCAA TCGAAAAACC TCGTCGTATC ATGCTGATGG TTCAAGCTGG      240

      ACCTGGTACA GATGCTACTA TCCAAGCCCT TCTTCCACAC CTTGACAAGG GTGATATCTT      300

      GATTGACGGA GGAAATACTT TCTACAAAGA TACCATCCGT CGTAATGAAG AATTGGCAAA      360

      CTCTGGTATC AACTTTATCG GTACTGGGGT TTCTGGTGGT GAAAAAGGTG CCCTTGAAGG      420

      TCCTTCTATC ATGCCTGGTG GACAAAAAGA AGCCTACGAA TTGGTTGCGG ATGTTCTTGA      480

      AGAAATCTCA GCTAAAGCAC CAGAAGATGG CAAACCATGT GTGACTTACA TCGGTCCTGA      540

      TGGAGCTGGT CACTATGTGA AAATGGTTCA CAATGGTATT GAGTACGGTG ATATGCAATT      600

      GATCGCAGAA AGCTATGACT TGATGCAACA CTTGCTAGGC CTTTCTGCAG AAGATATGGC      660
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1021

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TGAAATCTTT ACTGAGTGGA ACAAGGGTGA ATTAGACAGC TACTTGATTG AAATCACAGC      720

TGATATCTTG AGCCGTAAAG ACGATGAAGG CCAAGATGGA CCAATCGTAG ACTACATCCT      780

TGATGCTGCA GGTAACAAGG GAACTGGTAA ATGGACTAGC CAATCATCTC TTGACCTTGG      840

TGTACCATTG TCACTGATTA CTGAGTCAGT GTTTGCACGC TACATTTCAA CTTACAAAGA      900

AGAACGTGTA CATGCTAGCA AGGTGCTTCC AAAACCAGCT GCCTTCAACT TTGAAGGAGA      960

CAAGGCTGAA TTGATTGAAA AGATCCGTCA AGCCCTTTAC TTCTCAAAAA TCATTTCATA     1020

CGCACAAGGA TTTGCTCAAT TGCGTGTAGC CTCTAAAGAA AACAACTGGA ACTTGCCATT     1080

TGCAGATATC GCATCTATCT GGCGTGATGG CTGTATCATC CGTTCTCGTT TCTTGCAAAA     1140

GATTACAGAT GCTTACAACC GCGATGCAGA TCTTGCCAAC CTTCTTTTGG ACGAGTACTT     1200

CTTGGATGTT ACTGCTAAGT ACCAACAAGC AGTACGTGAT ATCGTAGCTC TTGCGGTTCA     1260

AGCAGGTGTG CCAGTGCCAA CTTTCTCAGC AGCTATTACT TACTTTGATA GCTACCGTTC     1320

AGCTGACCTT CCAGCTAACT TGATCCAAGC ACAACGTGAC TACTTTGGTG CTCACACTTA     1380

CCAACGTAAA GACAAAGAAG GAACCTTCCA CTACTCTTGG TATGACGAAA AATAAGTAGG     1440

TCAGCCATGG GGAAACGGAT TTTATTACTT GAGAAAGAAC GAAATCTAGC TCATTTTTTA     1500

AGTTTGGAAC TCCAGAAAGA GCAGTATCGG GTTGATCTGG TAGAGGAGGG GCAAAAAGCC     1560

CTCTCCATGG CTCTTCAGAC AGACTATGAT TTGATGTTAT TGAACGTTAA TCTGGGAGAT     1620

ATGATGGCTC AGGATTTTGC AGAAAAATTG AGCCGAACTA AACCTGCCTC AGTCATCATG     1680

ATTTTAGATC ATTGGGAAGA CTTGCAAGAA GAGCTGGAAG TTGTTCAGCG TTTTGCAGTT     1740

TCATACATCT ATAAGCCAGT CCTTATCGAA AATCTGGTAG CGCGTATTTC GGCGATCTTC     1800

CGAGGTCGGG ACTTCATTGA TCAACACTGC AGTCTGATGA AAGTTCCAAG GACCTACCGC     1860

AATCTTAGGA TAGATGTTGA ACATCACACG GTTTATCGTG GTGAAGAGAT GATTGCTCTG     1920

ACACGCCGTG AGTATGACCT TTTGGCGACA CGG                                  1953
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(2) INFORMATION FOR SEQ ID NO: 155:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 6474 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 155:

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CCGGCAGTAC ACGAGCTTGG GGAACAGCCA CTGGAACGAT GAGGTGTGAG CTCAAAATAT       60
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1022
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CCTCCAGTTA TGTTTTTCCT AATAGTATAC CGGAAGAGTG AAAGGATTTT ATAATGGAGC      120

GGTTACAAAG AACCTACTTT CTATTAAACA GTATACTATG AAAATGTGAA AATTTAACAT      180

TTTTTTGTAC AAATTTTATA AATTATTGCC TTTTTAATAT CAATAGTTAA TCTCTTATCC      240

AGATCCCCCT TGTGTAAACT TTATCTTTAT AAGCTTCAAG GCCCCTATCC CATCTATTTG      300

CAACAATTAG ATCACTTTGT TTTGTAAATA GTTCAAAATT CTTTTCAATA ATTACGTTAT      360

CTATACTAAC GTTTAAATTT GGTTCATATA CTAAAATTTT TATACCGACA ATCAATAGTT      420

CATTAATTAT ACTTAAAATA GCTGACTCTT TGTAATTATC TGAATTATAT TTCATCCCCA      480

ATTTATATAT TCCTACTATC TTTGGCTTTC GTTCCAATAT TTGTTTAACT ATGAACTGTT      540

TTCTATTTGT GTTTGAAATA TCAATCGCTT CTATCACTGG GGCATTTATT TCTATAAATT      600

CTTTTTTTAA TTGTTTAGTA TCTTTGGGAA GACAATATCC TCCAAATCCA AAAGAAGGAT      660

TATTATAAAA ATTTCCAATT CTTGGATCTA AACAAACACC TTTTATTACA ACTTCAGCAT      720

TTAAGCTTCT CCTCTCAGCA AAAGAATCTA GTTCATTAAA AAAGCAACAC GGAGAGCTAA      780

GAATGTGTTA GAAAAAAGCT TAATTGCTTC TGCTTCAGTA GGAGAAACTA ACATAACATT      840

TTTAATATTG GCAGTACTAT GAGTACTAAT CGAAAGGAAC AACTCTGCAA TTTTTCTTCC      900

TTCAACTGTC TCATCTCCAA CAACTATGCG ACTTGGATAT AAATTATCAT ATATAGAACA      960

ACCTTCTCTC AAAAATTCAG GGACAAAAAT GATATTTTTT GTATCAAACA GCCTTTTTAA     1020

TTTGTTTGAA AAGCCGATCG GAACTGTTGA CTTTAAAATA ATCTTTCCAT TAGGTTTTAC     1080

CCTCAGAATC TTCGATACCG TTTGTTCGAT TTCATATGTA TTAAAACTAC CAATTTTCTC     1140

ATCATAATCT GTCGGAAGCG CAATAATATA ATAATCAATA TTATTTTTAA TTTCAGAAAA     1200

TGTATCAAAA AAAGTAATAT TTAAGTTATT CTCGCAAAAA AACTTCATAA GCTCTTCATT     1260

TTTAGATGGA AGAATGCCCT TTTTTAAATT ATTTATTTTT ACAGAATCTA TATCATATGC     1320

AACAACTTTA TATTTAGATG CAAATAGTAA CGCGTAGGCC AGCCCAACAT GCCCCAAACC     1380

AATTACTGCT ATATTCATAA AACTACTTCC TTATTTCTTA ATCCAAAATC TAATAGAATA     1440

AGCTGCCCCA TTCCTTAAAT ACAACTCTTT AATATTGTTT AAAAGTTTTT CAACTGATTT     1500

CCAGATTATC AAAATCTGAG ATTTATAGCA CAATATTGAT GATATTCTAT CAATATAATT     1560

TTTTTCATCA AGTTCCTCTT GATACATTTT TAATTCTTTA GTTTTTCCCA TATAACTAAC     1620

CATACTACTA TCACTTACAT ATGGGAAGTC CTCATAATAT ATTACTTTAT AACGCATAAA     1680

TTCAAGCGCC CTTCCAATAC TATTCACAAA AACATGAGCA ACATGGTCAC CAAGTGAAAG     1740

CGGACAATAT ACGACACATT TGTCGTCTAA ATGCATTAAC AGCTCTTTTA TGATATCATT     1800

CTTTAATGTG TCCTCATTTT TTAATTCACT ATAGATATGA CGGTATAGAA AATTGCCATT     1860
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1023

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TCTATCTTTC CTATAGAGAC ATTCATAGTA CGATAAGTGT CTAAAATCAC ATTGTAGACG    1920

TTCACAAGCT AACCTGTCTT CTTTCTTCCT TTCTTCAATC GGATATTTCC CAAGGTTACA    1980

CAACTTATGA AATTGCTTAG CAGAGGGCTG TAGCTGTTGG CTCAAAGGGT AACCAGAAAA    2040

TATAGTAATA ACAAGTACAA TTTCTCCTTC TGAAGTTAAT TTTGAAATAT AATCACCACA    2100

GGAAAAAATT GCGTCATCTA AATGTGGAGA TAAAAAGATA TACTTAGTAT TGTTACTCAT    2160

AACCATTCCC TCTACAATTT ATCTAAAAAC TCACTAAGTG TCTGATTAAA TTCCACATCA    2220

TCAAAAAAAT TCACCTTATT CTTAATAATG AATATTTCGT TAAATAAACA TATATATAAA    2280

TATTTCAATA TCCTTTCAAT ATCATCCTCT AAATTCTCCT CAATATTTTG TATCAGCCCA    2340

TTTACAATCT TATTAAAAAA GATAAGCTCT TTATCTCTAA AATTAAATAT TTTCATACAA    2400

CTGTTGTATC GAAAAATATA TAAAATAATT TTTACTAATG TTTGAATATT TAAACAACTA    2460

AATAAATGAG TTGTACCCGG GACACTATTT ATGTTATCAA GAACACTATC TTGAAACCTC    2520

AACTCACAGT TCTTTTTGTG AAATTCTTTT TTATCGTTTA GATCTGATAT TTTTTTAGAC    2580

ATTTCAACAA TCTCAGACAT TTTATATGGA TATCTAGGAT GAATGCCAAA ACTATGCAAA    2640

ATGAACTGCA CCCCAAAAGT TAGACAGAAT AAATCTAACT TTTGGGGTGC AGTTCATAAG    2700

ATTGGGATAT TTTTTTTTAG CTAGAACTAG TAGAAATATA TAGTCAAATA ACAGATACCT    2760

TAAGGGTTTC TCATCTACAT AAAAAAATGA TACTTTTTTC TCTTCAGTAA TTACCTCATA    2820

AGCTTCACAA TAGAATCTCA TGTTTCCCTC CCCTATATTC TTAAATAAAA TCCTTTGGAA    2880

ATTGATATAT CTTAGTAAAA TATTGTTTAA GTTCCGGATG CGGAGCATGG GTAACAATAA    2940

TGACAGTCAA ATCCTCTCTA TCTAATATCT TACGTTCAAT CGCTAACGAA GTTCTCCTAT    3000

CGATAGCAGA AGTTCCCTCG TCAATTAATA CTATTTTCTT ATTTCTAATT AGCCCTCTAG    3060

CTAAAGTAAT TTTTTGTTTC TGCCCTCCTG ACAGTAATCT CCCATCATCA CCAACATAAT    3120

AATCTAAAAT GTTATTAGGA AAATCTTTTA CACTCAAACC AACTTGCTCT AAAGACTGTA    3180

GTATTTCTTC ATCAGTATAA TTTTCTTCCA ATAAAATATT ATCTCTAATC GTACCTTCAA    3240

ACAAATAAGC TTTTTGATCT ACATATAGAA CATTCGAAAC CATATTTAAA TAGGAGGTTT    3300

TTTTTATATC ATCCCCGCAG AATCGCAATT CTCCACTATA ATCTCTCAAA AAGCCATTCA    3360

ATAATTTTAA TAATGTAGAT TTCCCGCTTC CACTTTCACC TAAAATTAAA TACTTTTCAT    3420

TACGTTGAAA ACAAAAATTT AAGTTTTTTA ATATTTCTTT ATCTCCATAC TTATAGCAAA    3480

TATTTTTTGC TTCATATAAC GGAAAATCTC TATTCACCTC ATTTGGTTCG ATATCATTCA    3540

TTTTATTTGA CTCAATTGGA TTAATTGAAT ACAATTTTAA AAAAATAGGC TTCGTACCAA    3600
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1024

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TAATAGAGGA TAATTGACCT CCTAATTCAC CTAGCGCTGT AAAAATAACA CCTGTTAGTG        3660

CTCCTATTGC TTCAATAGTA CCAATTTTCA CTATTCCTTT TATTGCAAGA TAGCCTGTTA        3720

AAAAAACGAG AGATATCTGA AAAAAAATAT TGAGAAAGAA GCTAATAGCG CCTGCTAACG        3780

TTTCTACAGT TGTCTTTCTT TGTATAACCA TCTTTAATAA AATTCCTGCT TCTTTAATTT        3840

TCTTAGGCAA TACATATAAA AGATTCAAGG ACGCTAACAC ATCAAATCCA TTCAATATAG        3900

TCTCACTAGA TTTTAAAAAA GCTTCATTTT GGTTAGTTAA ATTTAGACTA ACTTCTCGCA        3960

TTTTCGATGC AAAGATTTTT GGTACAAGTA GCATAATCAT TAATGAAAAC AAGGTGGCTA        4020

CAGTCAATGA CCAATGATAG TGATTAAGAG TCACAACTGC AAATATAGTA CCAGAAATTC        4080

CTTTTATTAC TAAAAAAAGT TGTTTAAACG CCTGATCATT TAAAGTCTGA ACATCATTAT        4140

TTAGCCACGA AAGATATGTT CCTGATGATT TACTATGAAA TTCTTGATAG GTAGAGTTAG        4200

AGATGTCTGT GGCAACTCTA TTTCGAATCT CTAGATTAAA CTCTTGGATC ACTTCAACCT        4260

GATAATTTTT CACTACCCAG TCAAGGAATA TTATCCCACA CCAGACAATC ATTTGGTAGA        4320

TTGACAATTT CAAAAACCGC TCTAAATTCA TCGCAATTAA TTCATTCAAC ACCAGAGCAT        4380

TAATAGTTGC TGCATAAATT AGCAATAATT GACCAGCAAC AATAAATATC GTTAATAAAC        4440

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TTAATTGAAC ATAGTTTTCA TATATACAAT AGAAAAAACC AAAATGATAT AATAACATAT        4560

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AGCCTTGCAT TTGTCTCCTA TTAATAGTAA CCGCTTTATG TTTAAAGAAT AATATTTCTT        4680

TGTAACCAAT ATTCTCTCGT TGAAACTCAA TAAATTAAAA TATTTCCTAC AGTAATTATA        4740

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TAGTTTTAAT AAAACAACAC CGTCCTGATG TGAATCTATT TTCTCAAAAC CATTAATTAA        4920

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AACAAACAAG GGATTTCCAA CAAAATCGGT CTTCTCCTCT TCTCGTGTAC CATTTGGATA        5040

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AGCCATCAAC TTTAAAATTC GATCTGGCAT ATATTCATCA TCATCGTCTA AAAATGATAT        5160

ATACTTACCT CTAGAATTTT TGATACCTAT GTTTCTGGCA TTAGTTGCAC CTAAATCTTC        5220

ATTACTTAAA ATTAACTTAA TTCTATGATT GGTATAGCCA AATTGATGGA TAATTTTATT        5280

TCTTAAATTT ACATTACTAT AATTATCATC AATAATTATA ACTTCGATAT TTTTATAACT        5340

TTGATGTAAA CAACTTTTCA CAGCTCTAAT CAGAGATTCA TACCTATTAT GTGTTGGTAT        5400
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1025

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TATAATACTT ACTAATTCTT GATCTATATT CCTATCCATG ACTACTCTTC TCTAATAATT      5460

CATCATATAC TCTCATGGTT TCTACAAACA TTTTTTGCAC AGAAAAATGT TTTCTTATTT      5520

TTGATTTACT ATTCTCACCT ATATATTTCA AATACTCAGA ATCATTGAGT AAAAAATTAG      5580

CACAAGCACA CACTCCCTCA ACATCTTCCT TCTCAAATAA AAATCCATCA ACCCTATGTT      5640

CAATAATTTC ACTTAACCCG CCAACATTAC TAGCTAAAAC CGGAGTTCCT TGTGACATTG      5700

ACTCTAAAAC ACACATAGGT ATTCCTTCTG TATCAGAAGG AATATACAAT AAATCCGATA      5760

TTTGGTAAAC TATAGTAGCT GGATAGATTT CACCAAGTAA CCTGAAATTA TCTCTACATT      5820

TCAAATGGCA AATTTTTTCT TTCAAAGCAG CCCACATACT ACCATTTCCA GCCATAATAA      5880

AAATCACATC TTCTCTGACT AAAAATAATT TTTCTGCAAA TTCAAGGAAT CTATCCGGCC      5940

TTTTTTCTGG ATCCAACCTT CCAACATAAC AAATGATTTT TTGTTATTTG GAATACAAAA      6000

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GTTATTTATT GCAACTATCT TCTTATTTTT TATTATACTC TCCAATCTTT TTTTTCATAG      6120

TTTCAGATAC ACAAATAAAA GCATCTCCCA TAGAATATGT CCAAAAATCA AAATAAGTCA      6180

AGAATTTCTT TTTTAAGTTA TATTCAACCC ATCCATGGCA TGTTATCACT GTCTTAACCT      6240

TTCCAAATCC ATTCTTGTCA AGTTTTTTTA ACATATATAA AAAATAATTA GTTGAGTAGC      6300

CATGACAGTG TATAAGTTGG ATTTTTAATA ATTTTAAAAT ATTTTTAACG TGTAAGGCAG      6360

TTTCAAAATT ATTTGAACAT TGAGTACAAT CAACATAGGC AATATCTAAA TTTTTTATAAT      6420

CATCAATAAC CTTTGAATCT CTAGATACAA TTATCAAAAT AGGGAATAGA GACA          6474
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(2) INFORMATION FOR SEQ ID NO: 156:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 4792 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 156:

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TATTTAACGA TTTTTTTCAT GTCATTTCCT CCAAAATAGA ATACCTTATA ATCTTAACAG        60

AAAAAGAGCA TTTACGCCAT TATATGATAT CTATCTCTGT GATAAGTTTT TTTTATGGGT       120

AATTTAAAAG ACCAAACGCA AGATGGCAAT CAAGACCACT CCAAAGAGAA CTGTTCCGAC       180

TAGATTGCGG TAGCGAAAGG CTACCCAAGC TGTTGGAAAG ACGGCTAAGA AGTCCAGTCA       240

TTTGATTTGA GGAAGACTGC CAACCTTACC TGTCACTACG CTTGAAAGAA TCAGGGCAAA       300
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                                    1026
GATAATGGAA ACAGGCAAAA ACTTCAAAAA ACGCTCAACA ATCGCAGGCA GGCCCTTATA      360

CTTGACCAAG ATGAAGGGAA TCATACGGGG AATCCAAGTC ACCAAGCCAG AGAAAATAAC      420

TGCTAATAAA AGATACTTAC TGACCATCTA AAACCACCCC CATGCTACAA CCAAGTAGCG      480

TCGCAAACAG AACAGCTAGT GACTGAGACA TCACTGTCAA GAGCAAAAAG AAGGACACCG      540

CAACAACTGC TAGGATAATG AGCAGATTGC GGACAGGAAT CCGTCTTTGC ATAATCTGAA      600

ATTGCGAAGC AAAATACCAA TAAACATCCC AACCAGGGCA AAATCCAAGC CAAAGATTTC      660

TGGATTTGGT AGCAGGCCAC CCAGAGCCGT TCCGACTACT GTCCCCACAA ACCAAGCCAC      720

ATAGCTGTTA AGATTGTTTC CGTGCATCCA CATAGGATTT ACCTTGTCTG TATGGGCCAA      780

TTCACCCATC AAAACGCCAT AGGTCTCATC TGTCAAGATA CTAGACATAC CGATATTGTA      840

CCAAAGACTG GTATGACGGA AATAAGTCGA TGCGTGTAAA CTCAACAAAA AGAGACGCAA      900

GTTGATTAGA AAAACCGTCA TAGCAATAGC TGCCACAGGA GCTTGAACCA CAATCAGTGC      960

CAACATGGCA AACTGGGCAC TCCCAGCATA AACAAAGAGA CTCATCAAGC CCATCTCAAC     1020

AGGTGTCACA TAGGGCGCAC CGATAATTCC ACAGGCCAGG CCGATACTGA CATAGCCAAG     1080

AGCCGTTGGC ATGGCTGCCT GCGCCCCCTC CTAAAATCCT TTTTCTTTCA TCTTTCTCCT     1140

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CCAAAGCTAT TGTAAATAAG CTAGGTAAAA CAACCGTAAT GGCACCGATA GAGGATTGAA     1800

CTGCTCCCAT TGACTCCTCA GGTATTTGTT TAAAAACGAG TTCTTGCAAT CTAGGAGAGA     1860

GAACACCTGC GAAAAAGGCA TCCAAGGTAC TAAAGATGAG AATCCAGTCA AAACGAACTG     1920

TGGCAAATCC TACTAGAAGA AGCAACTGGA TGACAAGTGA GGCATAGAGA GCTGTTTTTA     1980

TGGAAATGGT ATGTTGCAGA TAGCCACTTA CAAGGCTTCC GACAATCAGG GCTGATAATT     2040

CTAGTGTGGC TAACAAGGCA AGAGATTGAC CAGTTTGTAA ATTCAAAAAG GGCTGGTTCC     2100
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1027

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TTAAAAATAG AGTGGAAATA GGAACCGTAA CATTTATCAC TGCTTGACTA GTAGAGATAA      2160

TAAACAAAAC CAAGAGCACC TTATTCATAT TCCATATCAA TTTCGATGAT TGGAGCAAAT      2220

GCTGGCAAAA GGATTTTACA GAGAGTCCTT CTTGATAGCT AATCGTTTTT TCTACTTTCA      2280

AGAGGTCAGT TTTTATGAAG AGGATACCTA AAAATGCGAT TAAAAAGGTA AGAGCGTTCA      2340

GTAAGGAAAT AAACTGGATG GATAGAATGC CTAGTAAGAC TCCTCCTAGG ATATTACTGA      2400

TTGTTTTCAC TAAACTAACA GTTGACTGTT TAAAGCCAAT AGCTTCTGCC AGATGGTCTT      2460

GCCCAATAAT TCTAATGAAA ATCGGAGTGA GCATGGCGCC TGAAAAATAA CTCAATGTGT      2520

CAGACAAGAG GTTAATCAGA CAAATAAATG CTACTAGCAA CAAGGAGAAA GACTGCCCTG      2580

AAAGTGATAA AGACACTATA GAGTAAAGCA AAAATTTTGC AAAACTAATG ACTGTGTATT      2640

TCAAGACACG ATGATGTTGA AAATCCGCCA AAACTCCCAG AAAGATTTGT AGAACTTGGG      2700

GCAGGGTTTC TGAAATCGTG ATGAGTAAAA TCGCCAAAGG GGCAAAAGAT GCATCTGCCA      2760

CATAATTCAG GAAGGCCAGA TAAAAAATCG TATCCCCAAG CGTTGAAATC CACTGGTTGA      2820

TAGTTAATTG CCTAAAATCT CTATTTTGAA GAAATACTTT CATCACAACT CCTTCTTAAG      2880

TTCAAATGGG AATCTTTCCC CAAGGATAGA CCGCGATACT ACTAACAACC AAAATTACAG      2940

TAACATCAAA AGCTGACCAA TGCCATTGTA GACTATATGC AGTCCAATAG GCCAATAAAT      3000

TGACTTTGTC ATTCTAAATA AGACTGCAAA TATAAGACCT CCACCCATAT AGAACACAAA      3060

GTCTGTCAAG ACCCAACCGT GATTACTAAT GTGCGAGACC CCAAATAAAA CAGCGGAACC      3120

AAGTACATCT AGCCCCCATT TCTTTCCTTT TTCCAGAGCA GTCATCACTA ATCCACGATA      3180

AATCATGTCT TCAAAAATGG GACCTGCAAT CACAGGATAA AAAAAATACA TCAAAAATGC      3240

TGTAGCCCCT GTAAAAGTCG GAGCAGCATG TTGATAAGAA ATTTCATTTC GAGTAGGTGG      3300

GAAAAGAAAA AAGGTAACGA AATTCCAAAC AACAAAAGCA AGCAGAGCTA GGAAGGAATA      3360

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CATAGCAATA AGAGCAAATA AAACCACAAG AAAATTCAAC ATCATATCCG ACAGATAATA      3480

GGCAAAGTCA GATAGCCCAG TAACAAGGTC GCTGCGTAAA ACTAGAACAC TGAACTTCTG      3540

GTCAGCAATA ACTAGTAGAA AAACTATAAT AAAGTAGCGG TGTGAGATTA TCTTTTTCAT      3600

ATATCACCTT TCTAATATCC AAATACCAAT AAAGTAACAA TGAGTAAGAA ACTATTCCAT      3660

GAAGCATGCA GAGCTATAGC CCAATAGATG GATCGGGTGT AGCGAAACAT CATACAAAAT      3720

ATCAAGCCCA TTCCAAAATA CTTTATGAAA TCTGTCGTTA TCCAACCATA CTGCAAAACA      3780

TGCATAGCGC CAAATATGGC AGCGGAAACA AGAACATCAA GATAGTATCT CTTAACTTTA      3840
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1028

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GATAAACTTG TCATCAAAAG ACCACGACAA ACAACCTCTT CTGATACAGG TGCGATAATA          3900

CTAGTATAAA GTATTCGCGT AACAAAATAG CTAATTCCTG TTAAATTGGT GGCTACTTCT          3960

ACGACTGTAC TTCCATTCTG GGTACGAGGA AAGATATAGG TTGTTAGATT TGCCCACACG          4020

AACAATAAGA AAAAAGAAAG AAGGAAAACA CCCAGGTAAG ACCAACGAAA CTGGAAACGA          4080

CCACACTCTT TCCAATGTTC ACTTTTGACA AAAGCAATTG TAGCTATAGT TCCCAGAATA          4140

AGTACCAATA AAACTTGGAA CACATAGTAC ATATTATCAG ACAAAGCAAC CATAAAATCT          4200

AAGTCTGATG TGACATTAAA AATGAGGTAA TAAGTCAAAA TCAACAAGCC AGTTGCTAGG          4260

TGAAATTTCA CTTCTTTCAT TTTCTTCATC CTATTATCTC CTATAAGAGC CTATCTTCTA          4320

CGGCGGCCAA ACAATCCATC TGCTAAATCT ATAGTCCAAT CAAAAGCTCC ACGATTAGGA          4380

CTCATCCCTT GATTGCCCCA ACCAGGGTAA ATTCCTGGGA CGCCCCAACC AGATATACCA          4440

CTTCTTCCAC CACCTCCCAT AGAATTTACG AGGTTGCCTC CTCTAACATC TTGCAACTCA          4500

GCTTCTGTCA ATTCCATTGT TTCTGCAAAT TGTAAATTTA ACATCTTTTA CACTCCTTCA          4560

ATTATCTTCA TTTGTAAACC ACTTCTGCGA CCTAGGATTT GCTTCAAGTG CTTTACAAGT          4620

ACAGTATAAC ACGAACATTG GCTTATTTTA GAAAATCGCA TATTTGATAT TTTTTCTTAT          4680

AGAAATTTCA GATTTGCGAT TTTGGTGAAT TTGATTACTT CTCTGGTATA ATAAAGTTAC          4740

TACTAATGAG GAGTGGAGAA ATATGAAGAA ACAAATTTTA ACATTATTGA AA                 4792
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(2) INFORMATION FOR SEQ ID NO: 157:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 2156 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 157:

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CCGTTCTCGG CGACGGCCAT CTGATGAAGC TATTTATGAG GGAAACTGGC AAGCTGGAGA            60

GTCAGAGTAT CTAGTCTTTC ACCGATTGCT GTGGCAGCAG ATGTGCAGGG AAAAGGAGTT           120

GCTCAAACCT TCTTAGAGGG CTTGATTGAA GGTTTTGATT ATCTTGATTT TCGCTCAGAT           180

ACGCATGCTG AAAACAAGGT TATGCAACAT ATTTTTGAAA AACTTGGTTT TAAACAAGTC           240

GGTAAGATGC CAGTAGATGG CGAACGCTTG GCCTATCAAG AATTAAAGAA ATAATGCAAA           300

AGAAGTATGT AAAAATCCTC TACTCCTCAC CAATTGGTAT TCTATCACTT GTAGCTGATG           360

ACCATTATTT GTATGGAATT TGGGTTCAGG AGCAGAAGCA TTTTGAGAGG GGACTAGGAG           420

ATGAAACGAT AGAAGAAGTT GTTAGTCATC CTATTTTAGA CCCAGTTATT GCTTGCTTAG           480
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1029

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ATGATTACTT TAAAGGCAAG CCTCAGGATT TATCCAACTT GCTCTTGGCG CCAATCGGAA     540

CGAATTTTGA AAAGAGAGTT TGGGACTATT TACAGGGCAT TCCTTATGGT CAGACAGTGA     600

CCTATGGACA AATTGCTCAA GACCTGCAAG TGGCTTCTGC TCAAGCAATT GGTGGAGCAG     660

TGGGACGCAA TCCTTGGTCT ATCCTAGTAC CTTGTCATCG TGTGTTGGGA GCAGGCAAGC     720

GTCTGACAGG TTATGCTGCA GGAGTGGAAA AGAAAGCTTG GCTCTTGGAG CATGAAGGAG     780

TAGATTTTAA AGATAGAAGC AATAGAAGGA GAAGCACATG TTAGAATTTA TCGAATACCC     840

CAAATGTTCA ACTTGTAAAA AAGCAAAACA AGAATTAAAT CAATTAGGTG TGGACTATAA     900

AGCCGTCCAT ATCGTGGAAG AAACACCTAG CCAAGAAGTC ATTTTGAATT GGCTAGAAAC     960

CTCAGGATTT GAATTGAAGC AATTTTTCAA CACCAGTGGT ATCAAATACC GTGAATTAGG    1020

GCTAAAAGAT AAGGTAGGAA GTTTGTCAAA CCAAGAAGCG GCTGAGTTGC TAGCAAGTGA    1080

CGGTATGTTG TTAAAACGGC CCATTTTAGT AGAAAATGGA ACTGTTAAGC AAATCGGTTA    1140

TCGAAAATCT TATGAGGAAC TGGGACTGAA ATAGTTTTTA TCTATCTCTT TGATAGATAA    1200

AATATATAAC TTCCCTGTTT CAAAGTATGA TAAACTAGTA GGTAGACAAA GTCTGTATCT    1260

GACCGTAGCA AATAATTTCA TTGACGGCAG AAGCATGGTA GCATGAATCA TTATCAGAAG    1320

AGGATGTTTT TATGAATGTT ACAACGATTT TAGCATCAGA TTGGTACCAA AACTTGATGC    1380

AATTGATTCC GGATGGCAAG CTGTTTAGCC TACGTTCGGT CTTTGATGGA ATCCCTAGAA    1440

TTGTCCAACA ACTTCCAACA ACAATTATGT TGACAATTGG TGGTGCCCTT TTTGGCTTGG    1500

TTTTGGCGCT TCTTTTTGCC ATTGTGAAGA TCAATCGTGT CAAGATTTTA TATCCCTTGC    1560

AGGCCTTCTT TGTTAGTTTC TTAAAAGGGA CACcGATTTT GGTGCAACTC ATGTTGACCT    1620

ACTACGGAAT CCCTTTGGCT TTGAAAGCCC TCAATCAGCA ATGGGGAACT GGTCTCAATA    1680

TCAATGCGAT TCCAGCTGCA GCTTTTGCGA TTGTCGCCTT TGCCTTTAAT GAGGCAGCTT    1740

ATGCTAGTGA AACCATTCGT GCAGCCATTC TCTCAGTTAA TCCTGGTGAG ATTGAGGCGG    1800

CACGCAGTCT GGGTATGACC CGAGCGCAAG TTTATCGACG AGTGATTATT CCTAATGCAG    1860

CGGTGGTAGC TACTCCAACC TTGATTAATT CCCTCATCGG TTTGACCAAG GGAACATCTC    1920

TAGCTTTTAG TGCGGGTGTT GTGGAAGTCT TTGCCCAAGC TCAGATTCTA GGTGGAGCTG    1980

ATTATCGCTA TTTTGAACGC TTCATCTCCG TTGCCCTTGT TTATTGGGTA GTCAATATCG    2040

GAATTGAAAG CCTCGGTCGT TTCATCGAGA GAAAAATGGC TATTTCTGCA CCTGATACAG    2100

TGCAACAGAT GTGAAAGGAG ACCTTCGTTA ATGATTAAGA TTTCGAATTT AAGCAA       2156
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(2) INFORMATION FOR SEQ ID NO: 158:

1030
(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 3140 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 158:

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GTATCTCTAC ACATGTCTTC AATCGATTTT GTTGTCCTCC AATTTAATTC CTTATATGCT      60

TTGTCTGCAT TTGCATAACA AGTTGCAACG TCTCCTGAAC GTCTTGGAAC TATTTTATAA     120

GGAATAGGGA TCTTATTAAC ACTTTCAAAT GTATTTACAA GTTGTAATAC ACTAGTGCCT     180

TCTCCCGAGC CTAGGTTATA GATATAAACA TCTGTTTTTT CAGATACTTT TTCTAAAGCT     240

TTTATATGTC CTATTGCTAA ATCTACTACA TGGATATAAT CACGCACACC AGTACCATCA     300

AGCGTATCAT AATCATTTCC GAACACACTT AGCTCTGATA GCTTACCTAC CGCTACTTGT     360

GCAATATAAG GCATCAAGTT GTTAGGAATT CCTGAGGGAT CTTCCCCAAT CAAACCAGAC     420

TCATGAGCAC CAATTGGATT GAAATAACGA AGCAACGCAA TACTCCATTC TGAATCTGCC     480

ACATGAACAT CTTTTAAAAT TTGCTCAAGC ATCACTTTCG TATACCCATA AGGATTTGTC     540

GCACTTGTTT GCATCGTCTC AATTAGAGGT GACTGATTGT TAATTCCATA TACAGTCGCA     600

CTTGAAGAAA AGACAATCTT TTTAACATTA AATTCTGACA TCACTTCAAC AAGTGCCAAT     660

CTACTCATAA TATTATTTTT GTAGTACATC ACAGGCTTTT GCACGGATTC TCCGACAGCT     720

TTATAACCTG CAAAATGAAT TGCAGCATCA ATCGATTCTT GTTCAAATAC CTTTCTCAAT     780

GCTTGTTTAT CACAAACATC TAATTCGTAA AACACGGGAC GTATTCCTGT AATTGCTTCA     840

ATACGGTCTA GCACCAAGAT GCTAGAGTTC GAAAGGTTGT CGACAATGAT AACTTCCTTT     900

CCTAAATTTA GTAATTCTAC TACGGTATGG CTACCAATAT AACCAGCTCC GCCTGTTACC     960

AATATTGCCA TCTGGGTTTC CTCCTAATTA ATTCCAACCG ACTTAACAAA TCTCATAAAC    1020

GCTTCATGCC CAGACGGTGT ATTCTTATAA ACTCCTGCAT CTTCCAGAAC TCTCGCAAAC    1080

ACTTGTCCTG CTTCGTGTTG AACTACGCTA TTAACCTCTT CTTTATTAAT GCGAGGATAT    1140

TTTTCTTTCA ATTGGTCGGC CCATTCTAAA TGATAATCCG CAATTGCATT ATCCTCTCCT    1200

AAAAGATATT TTCCAACTTC TTCTAACTCT GGTTTCAAAC GAGGTGGTAA TATCGCAAGT    1260

CCCATCACTT CGATTAACCC GATATTTTCC TTTTTAATAT GTTGTACATC TTGATGAGGA    1320

TGGAAAACAC CATCTGGGTA TTGTTCAGTA GTATGATTAT CTCTTAGAAC AATATCTAAT    1380

TCGTATCTCC CGTCCACTTT ACGAGCAATA GGAGTCACCG TATGGTGTGG GACATCTTCA    1440

GTCATAGCAA TGATGTCTAC TTCTAAATCT GAATATTCTC TCCACTTATT TAGAATTTTA    1500
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1031

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GTAGCTAAAT CTAACAAGCG ATTTTTATTT TCACTTTGTA ACCTAATTAC TGACATTGGC    1560

CATTTTACAA TACCAGCATT AACATCCTCA AAGTCTTTAA AACAAAATTC ACTCTCAAAT    1620

TTTGCTTTTT CCATTGGGAA AATATGTTTC CCTCCCTGGT AGTGGTTATG ACTAAGAATG    1680

GAGCCTCCTG AGATAGGAAG ATCAGAATTT GAACCAGCAA AATATCCTGG CAAAATATCA    1740

ACAATCTCCA ATAATTGTTC AAATGTTTTA GAGGTAATAG CCATTGGTAC ATGTTGACTA    1800

TTCAAAAATA TCGCATGCTC ATTAAAGTAT GAGTAGGGAG AATACTGGAA TCCCCATACT    1860

TCGTCACCAA GTTTCAACCG AATAATTCTA TGATTCGAAC GTGCTGGATA ATTTATTCGC    1920

CCCTGATATC CTTCATTTTC CATACATAGT AAACATTTGG GATAATTAGT TGCTTTTACT    1980

AATTTTTCAG CAGCAATTGT TTTTGGATCT TTTTCGGGTT TTGACAAATT TATCGTAATC    2040

TCTAGCTCTC CGTATTTAGT TGATGCTCGA AACTCAATAT TCTTAGCAAT AGCAGAAGTT    2100

TTAATATAAT CACTATCTTT ACTTAACTTA TAAAACTCTT CAACTGCTTC TTGAGGTGAT    2160

ATATCATATG AACTCCAAAA AATATCATTT AATCGACTAG GTAAAGGAAC TATGAAATTC    2220

ATTAACTCTG CTCCTAAACA TTCCTTTTCC TCGATTAAAT CTTTAATTTT ACCGTTTTTT    2280

AAGGCGATTT CCACTAAGTA ATCTTTTATT TGTTTCAGGT CATTTTCATC GGAAATGCGA    2340

TCAATTCCCT CCTCACCTAT TAACGCTAGT ACTCTATTTT TCACATATAT TTTGTCAATT    2400

TCATTATACA TTCCGTATTC AATTACTCTA TCAACAAAAT TATCAATAAT TGTTTTCATA    2460

TATTTTTCTT TCTAATTTAT GTTCCCATAT TTTCTATACA TTATCCATTT ATAAATTGCT    2520

TGCGTAGTAT GAGCAATTTT ATCAAGGTGA TGAATAATAT CTAAAGCACT AATTACTTCA    2580

GAAACGTTCC CATCATCTTC AAATATGTAA TTCATTATTT TCTTTTCCAT ATTTATACTA    2640

AGCTCTTCTA TCTCATTCTG TTTTTGTATA ACAACCATAT CTAAACATCC AGATTGTTCC    2700

TCTCTATAAC AAGATATAGC CCTATTCATA TGCAGTCCGA TAACTTCATG AAGTATTTTT    2760

ATTTTTGAAA TAATTTTCTT CAAAATTTCA TTATTTTGAA GAATCTGTAG ATTTTTTAAA    2820

ATTTCAACAA TTCTATCCCC AATACGTTCA ATGTCAGTTG ATATTTTTAT TACACTAATA    2880

ATTCTTCTTA AGTCATATGA AACAGGATGT TGTAAACAAA TTAACTCATA TCCTTTTTTA    2940

TCAATATTTA GAACTGACTC ATTTATGATT AAATCTTCTT TAATCAATTC TACTCGTTCT    3000

TCATTTGATA AATATTCAAA TAACTTCTCA TATTTATCAA GCACAGATAC CCAAATGGTC    3060

TCTAAATTAT TTGATAATTC TATAATTTCA TTTTCTAAAT ATAACCTTAA CATTTAGGTA    3120

CCTCTTCTTA ACAAAGTTCG                                               3140
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(2) INFORMATION FOR SEQ ID NO: 159:

1032

  (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 9048 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: double
      (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 159:

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CCGGATGATT TCCTGGTCAG ATAGGGGGAA AGTGACTTCC TCAGCAATCG CGCGTAGAGT        60

AGGATTCCCT TCACGGATAA TATCGTTCAT ATCAATTAAG TGAGCAGCTT TTGTAATACG       120

TTCTATTGCA GACATTTTCT CTCCTTATAT TATGTTTAGT GCAGTTAGCT ACTGCCAAAG       180

CCCAAGTGGT ATACTTGGAA TAAGCCACTG TGGATTAGTT CATTTTCTTT CATTACCTCT       240

ACATGATATC ACAAAATGAC AAGAATTGAA AGCATTATGG CATTTAGGAT TTATAGAAAA       300

TAGATAGGAA GTTCAATTCA ATTGTGAAAG AAATACTTAT CTGTGATATA ATAAAAAGAA       360

AAGGCTTGCA TAAGAAAGTA GGGAGAACGA AGATACAAAG AAGACAAAAT CGAAATCAGG       420

GTGGTTTAGC TTTTCGTTTT ATGAAGGGCT TGGTAAACTT TTTAGGAGTT ATCGCAAGTG       480

GAGCAATAAG GGATTTGTGG CGATACTCTT GCTAGCAGTT GGTTTATCAA TGGGCTTGGT       540

CTTGTTGTTT GAAAGCTTCC AAGGAATCCC TTGACTAGTC AAAAACGAGA TACTATTTCT       600

CAAGAGGGGA CTAAGCAAAA GTCTCAGGAG TAGGAAGAGG AAAAAACTGC CAGAATTATG       660

GCCCACGGGG ATTTGCTCTA CCACGATGGA CTTTTCTTTT CAGCTAAAAA AGAAGACGGT       720

ACCTATGACT TTCATGAAAA TTTTGAGTAT GTGACTCCTT GGCTCAAGCA AGGGGACTAA       780

GCAGCAGATT TAGCTATTGG TGATTTTGAA GGAACCATTA ATAAGGATCA TTATTTAGCG       840

GGTTATCTTC TCTTTAATGC TCCTGTTGAA GTTATGGATG CTATTAAGGA GGCAGGTTAT       900

CATGTGCTGG ATTTAGCTCA TAATCATATT TTGGATTCGC AAAATTGAGGG AGTTATTTCA       960

ACGGCCGATA TTATTGAGAA AGCTGGAATC ACTCCAATCG GAGTTTATAC GCACGAACCA      1020

CGTGATCAGG CTCCGCTGGT CATTAAGGAA GTGAATGGTA TCAAGGTTGC ATTGTTAGCC      1080

TATTCCTATG GTTTCAATGG AAATTGAGCAG TATATTTCTC AGGAAGACTA TAATCGTTAT      1140

CTTTCAGATT TAAACGAAGA TAAGATGAAG GTTGAAATTG AACGGGCAGA GAAGGAAGCA      1200

GATATCACCA TTATCATGCT TCAGATGGGT GTTGAGTATC GATTGGAACC AACTGAAGAA      1260

CAAAAAGCTC TTTATCACAA GATGATCGAT TTGGGAGCGG ATATTATCTT TGGAGGGCAT      1320

CCTCACGTTG TTGAACCATC TGAAACGGTT GAAAAAGATG GAGATAAGAA ACTCATTATC      1380

TATTAAATGG GGAACTTCAT TTCCAATCAA CGAATTGAAT CTATGGGAGA TGAAGAGAAT      1440

GCTAAGTGGA CTGAACGTGG TGTTCTCATG GATGTCACCA TCAAGAAGAA GGATGGAAAA      1500
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1033

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ACAACTATCG GAACAGCTAA AGCTCATCCT ACTTGGGTCA ATCGAACACC AAAGGGAACC    1560

TTTTCACCAG AAGGATATCC CTTGTATCAT TACCAAACTT ATATTTTGGA AGATTTTATA    1620

GAGGATGGCA GTCATCGTGA CCAGTTAGAT GAAGCGACTA AGGAACGAAT TGATACAGCC    1680

TATAAAGAAA TGAATGAACA TGTGGGATTG AAGTGGTATT AGCTTGAATC CAGAGGAAAG    1740

TAAATGATGA TTAAGGTAAT TGCGACAGAT ATGGATGGGA CCTTGCTGGA TGCTAGAGGT    1800

CAGCTTGATC TCCCACGATT GGAAAAGATT TTAGATCAGT TGGATCAAAG GGGCATTCGT    1860

TTTGTCATTG CGACGGGCAA TGAAATTCAC CGCATGAGAC AACTACTGAG TCCCTTGGTG    1920

GATCGAGTGG TTCTGGTTGT TGCTAATGGC GCTCGTATTT TTGAAAACAA TGAATTGATT    1980

CAGGCTCAGA CATGGGATGA CGCCATTGTC AACAAGGCTT TGACTCATTT CAAGGGTCGA    2040

GCGTGTCAGG ACCAGTTTGT TGTAACGGGG ATGAAGGGTG ATTTTGTCAA GGAAGGTACG    2100

ATTTTTACAG ATCTTGAAAG TTTTATGACT CCAGAAATGA TTGAAAAAATT CTACCAACGG    2160

ATGCAATTTG TGGATGAATT AACATCTGAC CTCTTTGGTG GTGTGCTCAA GATGAGCATG    2220

GTTGTTGGTG AGGAACGTTT GAGTTCGGTT TTGGAAGAAA TCAATGCTCT CTTTGATGGC    2280

CGTGTCCGAG CTGTATCCAG TGGCTATGGT TGCATTGATA TCCTCCAAGC TGGGATTCAT    2340

AAAGCATGGG GCTTGGAGGA ATTACTCAAG CGCTGGGACT TGAAATCCCA AGAAATCATG    2400

GCTTTTGGTG ATAGTGAAAA TGATGTTGAA ATGCTTGAAA TGGCTGGAAT TGCCTATGCG    2460

ATGGAAAATG CTGATGAGAA AGCCAAAGCT GTGGCGACTG CTCTAGCACC AGCCAACAGC    2520

CAAGGAGGAG TTTATCAAGT CTTGGAAAAC TGGTTAGAAA AAGGAGAATG AAGTGGCAGT    2580

ACAGTTATTA GAAAATTGGC TCCTAAAGGA ACAAGAAAAA ATTCAAACTA AGTATCGTCA    2640

CCTAAATCAC ATTTCTGTTG TAGAACCAAA CATTCTTTTT ATTGGGGATT CCATTGTCGA    2700

GTATTATCCT CTACAGGAGC TATTTGGGAC TTCAAAGACG ATTGTCAATC GAGGAATTCG    2760

TGGCTATCAG ACAGGACTGT TACTAGAGAA CCTTGATGCT CATCTATATG GTGGAGCAGT    2820

AGATAAAATT TTTCTTCTGA TTGGGACAAA TGATATCGGA AAGGATGTTC CTGTGAATGA    2880

GGCTCTCAAT AATCTCGAAG CTATCATTCA ATCCGTTGCT CGCGATTATC CATTGACAGA    2940

GATTAAATTG CTTTCCATTT TGCCTGTCAA TGAGAGAGAG GAGTACCAGC AGGCAGTCTA    3000

TATCCGCTCG AATGAAAAAA TTCAGAACTG GAATCAAGCC TATCAAGAGC TTGCATCTGC    3060

CTATATGCAG GTGGAATTTG TGCCAGTATT TGATTGTTTG ACAGACCAAG CAGGCCAACT    3120

CAAAAAAGAA TATACAACTG ATGGACTGCA CCTCAGTATT GCTGGTTATC AGGCTTTGTC    3180

AAAATCCTTG AAAGACTATC TTTACTAAAT AGCTAAATAA TGTTAAATTT GAGCATAATA    3240
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                                  1034
TCTTGTAAAA AATTCTAAAA TCCTTTAAAA TAAAAAGTGA CGGAGGAATT TATGAATGTA    3300

AATCAGATTG TACGGATTAT TCCTACTTTA AAAGCTAATA ATAGAAAATT AAATGAAACA    3360

TTTTATATTG AAACCCTTGG AATGAAGGCC TTGTTAGAAG AATCGGCCTT TCTGTCACTA    3420

GGTGACCAAA CGGGTCTTGA AAAGCTGGTT TTAGAAGAAG CTCCCAGTAT GCGTACTCGT    3480

AAGGTAGAGG GAAGAAAAAA ACTAGCTAGA TTGATTGTCA AGGTGGAAAA TCCCTTAGAA    3540

ATTGAAGGAA TCTTATCTAA AACAGATTCG ATTCATCGAT TATATAAAGG TCAAAATGGC    3600

TACGCTTTTG AAATTTTCTC ACCAGAAGAT GATTTGATTT TGATTCATGC GGAAGATGAC    3660

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TCTTTAAGTA AATTTGAGAT TTCTATGGAA TTACATCTCC CAACTGATAT CGAAAGTTTC    3780

TTGGAATCAT CTGAAATTGG GGCATCCCTT GATTTTATTC CAGCTCAGGG GCAGGATTTG    3840

ACTGTGGACA ATACGGTTAC CTGGGACTTA TCTATGCTCA AGTTCTTGGT CAATGAATTA    3900

GACATAGCAA GTCTTCGCCA GAAGTTTGAG TCTACTGAAT ATTTTATTCC TAAGTCTGAA    3960

AAATTCTTCC TTGGTAAAGA TAGAAATAAT GTTGAATTGT GGTTTGAAGA AGTATGAAGT    4020

GGACCAAGAT TATTAAAAAA ATAGAAGAAC AAATCGAGGC AGGGATTTAT CCCGGAGCCT    4080

CTTTTGCGTA TTTTAAGGAC AATCAATGGA CAGAGTTCTA TTTAGGCCAG AGTGACCCAG    4140

AGCATGGCTT GCAGACTGAG GCAGGACTAG TTTATGACCT AGCTAGTGTC AGCAAGGTTG    4200

TTGGGGTTGG CACACTTTGT ACCTTCTTGT GGGAAATAGG TCAATTAGAT ATTGATAGAC    4260

TGGTAATAGA TTTTTTACCT GAGAGTGATT ATCCAGACAT CACTATTCGC CAGCTCTTGA    4320

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CGGGCTATAC AGGTACCTTT ATCATGTGGA ATCGTCAGAA GCAAGAAGCC ACTATTTTCC    4860

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TTTACTAACA GTTGTGGCTG GTATTGCTTG GGGGTTGTCA GGAACGAGTG GCCAATACCT    5040
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1035

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AATGGCACAC GGAATTTCGG CTCTGGTCTT GACTAACTTG CGTCTTTTAA TCGCTGGTGG    5100

AATTCTCATG CTCTTGGCTT ATGCTACTGC AAAGGATAAA ATACTGGTCT TTTTAAAGGA    5160

TAGAAAGAGT TTGCTGTCTC TTCTTATTTT TGCTCTGATT GGTCTTTTTC TCAACCAATT    5220

CGCCTATCTG TCTGCTATTC AGGAGACCAA TGCGGGAACA GCGACGGTGC TTCAGTATGT    5280

TTGTCCTGTC GGAATTTTAA TTTATAGCTG TATCAAGGAT AGGGTGGCAC CGACACTGGG    5340

AGAGATAGTT TCCATCATAT TCGCCATCGG AGGAACCTTC CTGATCGCAA CACATGGGCA    5400

GTTGGACCAG TTATCCATGA CACCTGCTGG TCTGTTCTGG GGTCTCTTTT CTGCCTTGAC    5460

TTATGCTCTG TATATCATTT TACCCATAGC CTTGATTAAA AAGTGGGGGA GCAGCTTGGT    5520

CATTGGTGTG GGAATGGTCA TAGCAGGTTT GGTCGCCCTT CCTTTTACAG GGGTTCTACA    5580

GGCCGATATC CCGACTAGTC TTGATTTTCT CCTTGCGTTT GCAGGCATTA TCCTTATCGG    5640

GACTGTCTTT GCCTATACAG CTTTCCTTAA AGGAGCCAGT CTGATAGGAC CGGTCAAGTC    5700

AAGCTTGTTG GCTTCAATTG AGCCAATATC GGCGATTTTC TTTGCCTTCT TAATAATGAA    5760

TGAACAATTT TATCCCATTG ATTTTCTTGG TATGGCAATG ATATTGTTTG CTGTAACTTT    5820

GATTTCTTTG AAAGATTTAT TCTTAGAAAA ATAAAAAAGA CTCTTTGTCC GTGACAGAGA    5880

GTTTTTGCGT GGTAATCTAA TTATTTTCAA GATAAAATTC AAAGCGTTCG CCTACATATT    5940

GACTTTTTAC GTATTCAAAA GCAGTACCAT CTTCTAGGTA GGAAACCTGG GTCAATCCAA    6000

GAATAGCATG TCCTTTTTCA ACTTCCAAAT AGTGGGCAAT CTTTTCTTTA GCAAGGCGAG    6060

CATAGATGGT CTGTTGAGAT TTGCCGATAC GATAGCCATG TTTTTGCAAG GTTTGGAAGA    6120

AATGACTGGT GATTTCTTCT TTTTTAAAGT CCTTAATGAA TTTTTCAGGA ATAGAAGCAA    6180

CTTCATAAAC TAGGGGAACT TGGTCGGCAT AGCGGACCCG CTCCATTCGG ATAATATTGT    6240

CCGTTGGAAA AATTCCTAGC TTGGCAACTT CTTGCTCATT GGGAATGGTT TTTTTGTAGG    6300

AAATGAGCTG GCTAGAGGGA ACTTTACCTT GGGATTTGAC AATTTCAGTA AAACTGGTTG    6360

TCCCTCGCAT CTTTTCTTGT ACTCGAGTAC TGGAAACAAA GGTGCCGCTT CCTACACGGC    6420

GCTCTAAGAC GCCTTCTTCG ACTAATAGAG ATACGGCTTG GCGGAGGGTC ATGCGACTGA    6480

CCGCAAACTG CTCAGCTAAA TCTCTTTCAC TGGGAAGCCT CTCACCAATA GCCCAACGGT    6540

ACTCGTCAAT ATCCTTTTTT ATCTGATCAT GGATTTTTAT ATAAGCAGGT AGCATATTTT    6600

TCACTTCATT TCTATCTTTT CTCTATTGTA CCCCAATAAA CTAGAAAAAG TCAAACTTCG    6660

CCTTGTTTAG TTGGTAATTC GCCCTTATTT GTGATAGAAT ATTGAGAAAA GATATTTCTT    6720

TTGAGAAAGG AAAAAGATGA GCAACATTTC AACTGATTTG CAAGATGTAG AAAAAAATCAT    6780
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                                    1036
CGTATTGGAC TATGGTAGCC AGTACAACCA GCTGATTTCA CGCCGTATCC GTGAGATTGG      6840

TGTTTTTTCA GAACTAAAAA GCCATAAAAT TTCAGCTGCT GAAGTTCGTG AAGTCAATCC      6900

TGTAGGAATT ATTCTATCAG GTGGTCCAAA TTCTGTATAT GAAGATGGTT CATTTGATAT      6960

TGACCCAGAA ATCTTCGAAC TCGGAATTCC AATTTTGGGA ATCTGTTATG GTATGCAGTT      7020

ATTGACCCAT AAACTTGGAG GAAAAGTTGT TCCTGCAGGT GATGCTGGAA ATCGTGAATA      7080

CGGTCAATCA ACCCTAACTC ACACACCATC AGCGCTTTTT GAATCAACAC CTGATGAACA      7140

GACTGTTTTG ATGAGCCATG GTGATGCGGT TACTGAGATT CCTGCTGACT TTGTTCGTAC      7200

AGGTACATCA GCTGACTGCC CATACGCAGC CATCGAAAAC CCAGATAAAC ACATTTACGG      7260

TATCCAATTC CACCCAGAAG TTCGTCATTC TGTATACGGA AATGATATCC TTCGTAACTT      7320

TGCCCTTAAC ATTTGTAAGG CTAAAGGTGA CTGGTCAATG GATAATTTCA TTGACATGCA      7380

GATCAAAAAA ATTCGTGAAA CCGTCGGTGA TAAACGTGTC CTTCTTGGTC TATCAGGTGG      7440

TGTTGACTCA TCTGTCGTTG GGGTTCTTCT CCAAAAAGCG ATTGGCGATC AATTGATCTG      7500

TATCTTCGTA GACCACGGTC TTCTTCGTAA AGGCGAAGCT GATCAAGTTA TGGACATGCT      7560

CGGTGGTAAG TTTGGTTTGA ATATCGTCAA AGCAGACGCT GCTAAACGTT TCCTTGACAA      7620

ACTTGCTGGC GTTTCTGACC CTGAACAAAA ACGTAAAATC ATCGGTAACG AGTTTGTCTA      7680

TGTATTCGAT GACGAAGCAA GCAAGCTCAA AGATGTGAAA TTCCTTGCTC AAGGTACTTT      7740

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CGTGGtGGTC TTCCAGAAGA TATGCAGTTT GAATTGATTG AACCACTCAA TACTCTTTAC      7860

AAGGATGAAG TTCGTGCTCT TGGTACAGAG CTTGGTATGC CAGACCATAT CGTATGGCGC      7920

CAACCATTCC CAGGACCAGG ACTTGCTATC CGTGTCATGG GTGAAATCAC TGAAGAGAAA      7980

CTTGAAACCG TTCGTGAATC AGACGCTATT CTTCGTGAAG AAATCGCTAA AGCTGGACTT      8040

GACCGCGATA TTTGGCAATA CTTCACTGTT AACACAGGCG TTCGTTCAGT CGGTGTTATG      8100

GGTGACGGTC GTACGTATGA CTACACGATT GCAATCCGTG CTATCACTTC TATCGATGGT      8160

ATGACTGCTG ATTTTGCCAA AATTCCATGG GAAGTACTTC AAAAAAATCTC AGTACGTATC      8220

GTAAATGAAG TGGATCATGT TAACCGTATC GTCTACGATA TTACAAGTAA ACCACCTGCA      8280

ACAGTTGAGT GGGAATAATC GCAAAAAAAT TAAAAGCTTT GTAAAATCAA CGGTTACAGA      8340

GGATTAAAAA CTGTAACTGG GATTAAAACG GGAACATTTG CTAAAAAGAA TAAATTGAAT      8400

AATAGTTCCA AGTGGTTTAC ATTTGGACAA AAAATTAGAC CGTAGTTTTC AAGCTGCGGT      8460

CTTTTGATAT ATATAATGAG AATTAATGGC TCTTTGTCAA CTGTAGTGGG TTGAAGTCAG      8520

CTAAGCTCGA GAAAGGACAA ATTTTGTCCT TTCTTTTTTG ATATTCAGAG CGATAAAAAT      8580
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1037

CCGTTTTTTG AAGTTTTCAA AGTTCCGAAA ACCAAAGGCA TTGCGCTTGA TAAGTTTGAT   8640

GAGATTATTG GTCGCTTCCA ATTTGGCGTT AGAATAGTGT AGTTGAAGGG CGTTGACGAT   8700

TTTCTCTTTG TCCTTTAGAA AGGTTTTAAA GACAGTCTGA AAAAGAGGAT GAACCTGCTT   8760

TAGATTGTCC TCAATGAGTC CGAAAAATTT CTCCGGTTCC TTATTCTGAA AGTGAAACAG   8820

CAAGAGTTGA TAGAGCTGAT AGTGATGTTT CAAGTCTTGT GAATAGCTCA AAAGCTTGTT   8880

TAAAATCTCT TTATTGGTTA AATGCATACG AAAAGTAGGG CGATAAAAAT GTTTATCGCT   8940

GAGTTTACGA CTATCCTGTT GTATGAGCTT CCAGTAGCGC TTGATAGCCT TGTATTCATG   9000

AGACTTTCGA TCCAATTGAT TCATGATTTG AACACGCACA CGACTCGG   9048

(2) INFORMATION FOR SEQ ID NO: 160:

         (i) SEQUENCE CHARACTERISTICS:
             (A) LENGTH: 10399 base pairs
             (B) TYPE: nucleic acid
             (C) STRANDEDNESS: double
             (D) TOPOLOGY: linear

         (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 160:

GTACCTTTAT TGATGAATGG ACTGTTTAAA TCAGTAGCAC GCCAACCAGA TATGCTTTCT   60

GAGTTTCGTA GTTTGATGTT TTTAGGTGTT GCCTTTATTG AAGGAACTTT CTTTGTAACT   120

CTTGTCTTCT CATTTATTAT CAAATAAATA CATGGAACGA GAAGAAAAGG GAGGATTTTA   180

GATGGAAGAA AGTATTAATC CAATCATCTC TATTGGTCCT GTTATCTTCA ATCTGACTAT   240

GTTAGCCATG ACTTTGTTGA TTGTGGGAGT TATTTTTGTC TTTATTTATT GGGCAAGCCG   300

CAATATGACC TTGAAACCCA AAGGAAAGCA AAATGTACTT GAGTATGTCT ATGACTTTGT   360

TATTGGATTT ACAGAACCTA ACATTGGTTC GCGCTACATG AAAGATTACT CACTCTTTTT   420

CCTTTGTTTA TTCCTTTTCA TGGTGATTGC CAATAACCTT GGCTTAATGA CAAAGCTTCA   480

AACGATCGAT GGGACTAACT GGTGGAGTTC GCCAACCGCT AATTTACAGT ATGACTTAAC   540

CTTATCTTTT CTTGTCATTT TGTTGACACA TATAGAAAGC GTTCGTCGTC GTGGATTTAA   600

AAAAAGTATA AAATCTTTTA TGAGTCCTGT TTTTGTCATA CCGATGAATA TCTTGGAAGA   660

ATTTACAAAC TTCTTATCTT TGGCTTTGCG GATTTTTGGG AATATCTTTG CAGGAGAGGT   720

CATGACGAGT TTGTTACTTC TTCTTTCCCA CCAAGCTATT TATTGGTATC CAGTAGCCTT   780

TGGAGCTAAT TTGGCTTGGA CTGCATTTTC TGTCTTTATT TCCTGCATCC AAGCTTATGT   840

TTTTACTCTT TTGACATCTG TGTATTTAGG GAATAAGATT AATATTGAAG AGGAATAGAA   900

1038

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AGGAGTAACT GATGCACGTA ACAGTAGGTG AATTAATTGG TAATTTTATT TTAATCACTG     960

GCTCTTTTAT TCTTTTGCTA GTCTTGATTA AAAAATTTGC ATGGTCTAAT ATTACAGGCA    1020

TTTTCGAAGA AAGAGCTGAA AAAATTGCTT CAGATATTGA CAGAGCTGAA GAAGCCCGTC    1080

AAAAAGCAGA AGTATTGGCT CAAAAACGCG AAGATGAATT GGCTGGTAGC CGTAAAGAAG    1140

CTAAGACAAT CATTGAAAAT GCAAAGGAAA CAGCTGAGCA AAGTAAGGCT AATATCTTAG    1200

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TACGTCTGCT CATCCTCTAA CTGATGAACA GAAGACTCGT TTGCTCCCTT TGATTGAGAA    1800

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TGTTAAAGAA AATTTGAAAT AGAAAGTGGT GTTCTTTTGG CAATTAACGC ACAAGAAATC    1980

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GGTTTGAAAG CTATTGACGC CCTTGTACCG ATTGGTCGTG GTCAACGTGA GTTGATTATC    2460

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CAAGATATGA TCTGTATCTA CGTCGCGATT GGACAAAAAG AATCAACAGT TCGTACGCAA    2580

GTAGAAACAC TTCGTCAGTA CGGTGCCTTG GACTACACAA TCGTTGTGAC AGCCTCTGCT    2640

TCACAACCAT CTCCATTGCT CTTCCTAGCT CCTTATGCTG GGGTTGCTAT GGCGGAAGAA    2700
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1039

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GATGTTTTCT ATCTCCACAG CCGTTTGCTT GAGCGCTCAG CTAAAGTTTC TGATGAACTT      2880

GGTGGTGGAT CAATTACAGC CCTACCATTT ATCGAGACAC AAGCAGGAGA TATCTCAGCC      2940

TATATCGCAA CCAACGTGAT TTCTATCACT GATGGACAAA TCTTCCTTGG CGATGGCCTC      3000

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CCTGTTGAGA AACAAGTAAC CATTCTTTAT GCTTTGACAC ATGGTTTCTT GGATACTGTT      3300

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CCAGAGATTT TGGAAACCAT TCGTGATACA AAAGACTTGC CAGAAGAAGC AGTCTTGGAT      3420

GCTGCGATTA CAGAGTTTCT CAATCAATCT AGCTTCCAAT AAGAATAGAG GTGTCAGATG      3480

GCAGTATCTC TAAATGATAT TAAAACAAAA ATCGCCTCAA CAAAAAATAC GAGTCAAATC      3540

ACTAATGCCA TGCAAATGGT ATCGGCTGCT AAGCTAGGTC GTTCTGAAGA AGCTGCTCGC      3600

AACTTCCAAG TTTACGCTCA GAAAGTGCGT AAACTTTTGA CAGATATCCT TCATGGTAAT      3660

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CAGTTGTTGC CTCAGTTTGC AGAAAGTATG ATTTACGGTC CCATTATCGA TGCCAAGACA      4200

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ACAGAAATCG TAGCAGGTGC TAGTGCCTTA GAATAGGCTC TAGTCCAGCT CGTATGAAAA      4380

TGAACTTAGG ACCTAGTTGA GCTAGGAACC GACAGTATCT TATATAGAAT AGGAGAAGGA      4440
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                              1040
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AGGGGAAAAA CTTCCTGAGA TTAACAATGC ACTTGTCGTC TACAAAAATG ACGAAAGAAA       4560

AACAAAAATC GTCCTTGAAG TAGCCTTGGA GTTAGGAGAT GGTATGGTTC GTACTATCGC       4620

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CTCTGTACCA GTAGGTAAAG AAACTTTGGG ACGTGTCTTC AACGTTTTGG GAGATACCAT       4740

TGACTTGGAA GCTCCTTTTA CAGAAGACGC AGAGCGTCAG CCAATTCATA AAAAAGCTCC       4800

AACTTTTGAT GAGTTGTCTA CCTCTTCTGA AATCCTTGAA ACAGGGATCA AGGTTATTGA       4860

CCTTCTTGCC CCTTACCTTA AAGGTGGTAA AGTTGGACTT TTCGGTGGTG CCGGAGTTGG       4920

TAAAACTGTC TTAATCCAAG AATTGATTCA CAACATTGCC CAAGAGCACG GTGGTATTTC       4980

AGTATTTGCT GGTGTTGGGG AACGTACTCG TGAGGGGAAT GACCTTTACT GGGAAATGAA       5040

AGAATCAGGC GTTATCGAGA AAACAGCCAT GGTCTTTGGT CAGATGAATG AGCCACCAGG       5100

AGCACGTATG CGTGTTGCCC TTACTGGTTT GACAATCGCT GAATACTTCC GTGATGTGGA       5160

AGGCCAAGAC GTGCTTCTCT TTATCGATAA TATCTTCCGT TTCACTCAGG CTGGTTCAGA       5220

AGTATCTGCC CTTTTGGGTC GTATGCCATC AGCCGTTGGT TACCAACCAA CACTTGCTAC       5280

GGAAATGGGT CAATTGCAAG AACGTATCAC ATCAACCAAG AAGGGTTCTG TAACCTCTAT       5340

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CGTTGACCCA CTTGCTTCAA GCTCACGTGC CTTGGCACCT GAAATCGTTG GAGAAGAGCA       5520

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CTCGTGATAT CGATATCAGT CGTGCAGAAC GTGCCAAACT TCGTGCAGAA CGTGCAATTG       6180

AAGAAGCACA AGACAAACAT TTGATTGACC AAGAACGTCG TGCTAAGATT GCTTTGCAAC       6240
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1041

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CAAGTTCATT TTTTATGGTG TTTTAAGGAG CAAAACGGAT GCAGACTGCT TCGGGAACAT    6360

GGAAGTCGTT GGAGAGTTCT GCTAGACGAC CATTGTCACA ATTACGTTTA AAGACAGTTG    6420

CATTGTCAGA GTCTTGATGG ACAACAATGA GAAATTTTTG GTCGGGTGTC AAATCAAAAT    6480

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CCAAATCTGC AACGTCAGGT TTTGACCTTT GCAAGAAACG TTCCTGTTTA CTTAGAAGAT    7860

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TTAGAGCAAG TTTTTGACCAA TTTTTCTAGC CAGGCTACAG TTTTGGCAAG TAAGGTTTCA    7980
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                                     1042
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TTGATTATCG TTCCTTTCAT GCTCTTTTAT CTCTTGCGTG ATGGGAAAGG CTTGCGTAAC     8100

TATTTGACCC AATTCATTCC AAGAAAATTG AAGGAACCTG TTGGACAAGT TTTATCAGAT     8160

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ATCCACCCTA TTAATGTTCT CTTTGTTTTG TTAACTTCAG GATCTATGTT TGGTATCTGG     8520

GGAGTTTTAC TTGGTATTCC GGTTTATGCC TCTGCTAAGG TTGTCATTTC AGCCATTTTC     8580

GAATGGTATA AGGTAGTCAG TGGTCTATAT GAATTAGAGG GTGAGGAAGT CAAGAGTGAA     8640

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TCAAGAAATG GACGATTTGG ATACTGCTTA TGAGTATTAT CAAGAGTTGA CAGGAGATTT     9720

GAAGGACAAT CCAGAATTTC TGGAACACTA TATCTATCTC TTGCGTGAAT TGGGACATTT     9780
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1044

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GCGACCGATC GCAATCTTTA TTTACTTGTT TCTGATAATG GAATCGGTAT TTCGACAGAA      780

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ACACCATCTA AAAAGAAAAA ATAAAAATAT CGCTCCAATT GGGGCGATAT TTTGGATTTA     1020

TCTTCTACGT TTTCGTTTGA TAATAGACCG TTGAACTTTT AAAACAAGTA AGCTGAATCC     1080

GATTGCTGCG GCAAAGGCAA GAGCAGTTGA TAATTTTAAT GCTAAAAAGA TAAAACTAAA     1140

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AATAAAGTCC CTTTTCATTT TCAAAGCATG GCTGATTTTG GAGAAATGTG GTATAATTTT     1440

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AAACTACTAT AACTTTACAC ATATCGATGA TGAAAAGACG CATAAACGTG ACCTCTTCTT     2040

GGCTGAGCCA AGTGATCCAG AGAGCCACTA TTCCATTTTT GAAGATAATC ATGGGACCCA     2100

TATCTTTGCC AACAATGACC TTGATTTGAT GATCAAATTA ACAGAATTGG TGGAGCATGG     2160

CTTTACTCGC TGGAAACTAG AAGGGCTCTA CACTCCTGGT CAGAACTTTG TTGAGATTGC     2220

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GGCTAGAATG CTCTATTCGA TGGGATTTTT AAGAAAAGTA GTGTTCTTGA GTTTGAAAAT     2520
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1045

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CGATTGGTAA TCGCTATGTT GTGGTGGATT TAGAGGCAAC TAGCACAGGT AGTAAGGCTA        2640

AAATTATCCA AGTGGGAATT GTCGTGATTG AGGACGGAGA AATCGTCGAT CACTATACGA        2700

CGGATGTCAA TCCACATGAA CCCTTGGATG CTCATATCAA AGAACTGACA GGATTGACAG        2760

ACCAACGTCT GGCGCAAGCA CCTGATTTTT CGCAAGTTGC CAGAAAAATA TTTGACTTGG        2820

TGGAGGATGG GATTTTTGTA GCCCATAATG TTCAGTTTGA TGCTAATCTC TTGGCGGAAA        2880

ATTTATTTTT TGAAGGCTAT GAGCTAAGAA ACCCTCGTGT TGATACGGTC GAATTGGCCC        2940

AGGTCTTTTT CCCTGAACTG GAAAAATATA GCTTGCCGAT TTTGTGTCGA GAATTAGGAA        3000

TTCCTCTTAA ACACGCACAC ACAGCCCTTT CAGATGCCCA AGCTACAGCA GAATTACTTC        3060

TTTTTTTACG GAAAAAGATG ACCCAGCTTC CTAAAGGTCT CTTGGAACGC TTGCTGGAAA        3120

TGGCTGACGC TCTCCTATAT GAGTCCTACC TGGTTATTGA GGAAACTTAT CGCAACCAAT        3180

CTATCCTGAG TTCTCCAGAC TTGGTCCAAG TTCAAGGTCT ATATTTTAAG AAAACGGAAG        3240

CTTCTCTGGA GCCACGAAAA CTATCTCAAG ACTTTTCTAA AAATATTTCT CTGTTGAACC        3300

TTGAAGTGAG GGAGGAACAA GAAAGTTTTG CTAAAGAGGT TGGCTTGCTA TTGAAAGATG        3360

AACCTGTCTC TCTGATTCAA GCGCCGACAG GGATTGGGAA AACCTATGGC TATCTCTTAC        3420

CCGCTTTATC TCAATCCAAA GAGCGACAAA TTGTTCTTAG TGTTCCGACA AAGATTCTTC        3480

AAAATCAAAT CATGGAAGAA GAAGGTAAAC GCCTCAAGGA AGTGTTCCAT ACAGATATTC        3540

ATAGCTTAAA GGGACCACAA AATTATCTGA AGTTGGATGC CTTTTATCAT TCCTTGCAGG        3600

AAAATGATGA AAATCGCTTA TTTAGACGCT TTAAAATGCA AGTCTTGGTC TGGCTTACTG        3660

AGACAGAGAC AGGAGATTTG GATGAAATCG GGCAACTCTA CCGTTACCAA CATTTTCTAG        3720

CAGACCTTCG TCATGATGGG AATTTATCAT CCCAGAGCTT ATTTGTGACG GAAGATTTTT        3780

GGAAACGTAG TCAAGAAAGG GCAGAGACTT GCAAGCTTTT AGTGACTAAT CATGCCTATC        3840

TCGTAACCAG ACTTGAAGAT AATCCTGAAT TTGTCAGTGA CCGTTACTG ATTATTGATG         3900

AAGTCCAAAA GATTTTGTTA GCTCTAGAAA ATCTGCTTCA AGAGACCTAC GATATACAAT        3960

CTATTATCGA TTTAATTGAT AAGGCTTTAG TAGGAGAAGA AAACAGGGTT CAACAACGGA        4020

TACTAGAAAG TATTCGCTTT GAGTGTCTCT ACTTGATAGA ACAATTTCAG TCTGGCAAAT        4080

CTAGGAAAAA TATCTTAGAT TCTCTGGACA ATCTCCATCA GTATTTTTCA GAATTGGAAG        4140

TAGAAGACTT TGATGAGCTG GTTCGCTATT TTACAGCTGA AGGTGATTAC TGGCTTGAAG        4200

TAACTGAAAC GAGTCAAAAG AAAATTCAGA TTTCTTCTAC AAAATCAGGC CGTACTCTTC        4260
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1046

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TGTCCTCTTT ACTTCCTGAG AGTTGCCAAG TCTTGGGAGT ATCGGCTACT CTTGAGATTA    4320

GTCAGAGGGT TTCTTTGGCA GACCTTTTAG GCTATCCTGA AGCTAAATTT GTCAAGATTG    4380

AATCTCGGGG AAAACAGGAA CAAGAAGTGG TCATGGTCAA AGATTTCCCT CTGGTAACAG    4440

AAACCTCCTT AGAAGTCTAT GCCAGAGAGG TAGCTGCTTT ACTAGTGGAA ATTCAAGCTT    4500

TCCAGCAACC GATTTTGGTT CTCTTTACCG CTAAAGACAT GCTTCTAGCA GTATCGGATT    4560

TACTTACAGT TAGCCACTTG GCCCAGTATA AAAATGGGGA TGTTCATCAG CTAAAGAAAC    4620

GCTTTGAAAA AGGTGAACAA CAAATCTTGC TTGGTGCAGC AAGTTTCTGG GAGGGAGTTG    4680

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ATGATTATCA ATTGCCAATG GCCATTATTC GTTTAAAACA GGCTTTGGGA AGAAGTATGA    4860

GACGTGAATA CCAACGTTCC TTAACTCTTA TTTTGGATAG GAGAATCGTC GGAAAACGAT    4920

ACGGCAAACA AATAGTAGCA TCTCTAGCAG AAGAAGCGAC TGTTAAAACC ATCTCTCGAT    4980

CCGAAGTTGA CGAGGCTATT GATAGATTTT TTAATGAGCT TTGATAAATA GTATTGTATG    5040

AAAGTATAAG GTTAGTATAT ATGAAACGTT CTCTCGACTC AAGAGTCGAT TACAGTTTGC   .5100

TCTTGCCAGT ATTTTTTCTA CTGGTCATCG GTGTGGTGGC TATCTATATA GCCGTTAGTC    5160

ATGATTATCC CAATAATATT CTGCCCATTT TAGGGCAGCA GGTCGCCTGG ATTGCCTTGG    5220

GGCTTGTGAT TGGTTTTGTG GTCATGCTCT TTAATACAGA ATTTCTTTGG AAGGTGACCC    5280

CCTTTCTATA TATTTTAGGC TTGGGACTTA TGATCTTGCC GATTGTATTT TATAATCCAA    5340

GCTTAGTTGC ATCAACGGGT GCCAAAAACT GGGTATCAAT AAATGGAATT ACCCTATTCC    5400

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AAATTATTAT CCCAGTATTT GTGACTGCTG TAACAGGAGT TGCTGGTTTC TTAGCTATCT   5700

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ATCGGATTTT GGCTTGGCTC AATCCCTTTG AGTTTGCCCA AACAACGACT TACCAGCAGG    5820

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ATCTGCTTAT CCCAGTTCGA GAGTCAGATA TGATTTTTAC GGTTATTGCA GAAGATTTTG    5940

GCTTTATTGG CTCTGTCCTG GTTATTGCCC TCTATCTCAT GTTGATTTAC CGTATGTTGA    6000

AGATTACTCT TAAATCAAAT AACCAGTTCT ACACTTATAT TTCCACAGGT TTGATTATGA    6060
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1047

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TGTTGCTCTT CCACATCTTT GAGAATATCG GTGCTGTGAC TGGACTACTT CCTTTGACGG      6120

GGATTCCCTT GCCTTTCATT TCGCAAGGGG GATCAGCTAT TATCAGTAAT CTGATTGGTG      6180

TTGGTTTGCT TTTATCGATG AGTTACCAGA CTAATCTAGC TGAAGAAAAG AGCGGAAAAG      6240

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GTCTTGCGTC GAGCCAATAT CACATGTGAT ATGGTTGGTT TTGAAGAGCA AGTAACGGGT      6420

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CCAATTGCCC TCAATCAAGC AGAGATATTG AAAAATAAGC GATACACTTG TTATGACGGC      6660

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CTTTTTTCAT AAAAAAATGC TATAATGAAG GGTATGAAAT ATCACGATTA CATCTGGGAT      6960

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GCACTGTATG GTATCACACA AGACCATGAC AGTGTCTATC AAGCTTTAAA GGTTTCTACT      7080

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GACATTTCAA ATCAAGGTGG CCGTCATTTT TTGGTCTCTC ATCGAAATGA TCAGGTTTTG      7260

GAAATTTTAG AAAAAACCTC TATAGCAGCT TATTTTACAG AAGTGGTGAC TTCTAGCTCA      7320

GGCTTTAAGA GAAAGCCAAA TCCCGAATCC ATGCTTTATT TAAGAGAAAA GTATCAGATT      7380

AGCTCTGGTC TTGTCATTGG TGATCGGCCG ATTGATATCG AAGCAGGTCA AGCTGCAGGA      7440

CTTGATACCC ACTTGTTTAC CAGTATCGTG AATTTAAGAC AAGTATTAGA CATATAAGAA      7500

AAAGGAATAA GATGACAGAA GAAATCAAAA ATCTGCAGGC ACAGGATTAT GATGCCAGTC      7560

AAATTCAAGT TTTAGAGGGC TTAGAGGCTG TTCGTATGCG TCCAGGGATG TACATTGGAT      7620

CAACCTCAAA AGAAGGTCTT CACCATCTAG TCTGGGAAAT TGTTGATAAC TCAATTGACG      7680

AGGCCTTGGC AGGATTTGCC AGCCATATTC AAGTTTTTAT TGAGCCAGAT GATTCGATTA·     7740

CTGTTGTGGA TGATGGGCGT GGTATCCCAG TCGATATTCA GGAAAAAACA GGCCGTCCTG      7800
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1048

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CTGTTGAGAC CGTCTTTACA GTCCTTCACG CTGGAGGAAA GTTCGGCGGT GGTGGATACA      7860

AGGTTTCAGG TGGTCTTCAC GGGGTGGGGT CGTCAGTAGT TAATGCCCTT TCCACTCAAT      7920

TAGACGTTCA TGTTCACAAA AATGGTAAGA TTCATTACCA AGAATACCGT CGTGGTCATG      7980

TTGTCGCAGA TCTTGAAATA GTTGGAGATA CGGATAAAAC AGGAACAACT GTTCACTTCA      8040

CACCGGACCC AAAAATCTTC ACTGAAACAA CAATCTTTGA TTTTGATAAA TTAAATAAAC      8100

GGATTCAAGA GTTGGCCTTT CTAAATCGCG GTCTTCAAAT TTCAATTACA GATAAGCGCC      8160

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ATATCAACGA GAACAAGGAT GTAATCTTTG ATACACCAAT CTATACAGAC GGTGAGATGG      8280

ATGATATCAC AGTTGAGGTA GCCATGCAGT ACACAACTGG TTACCATGAA AATGTCATGA      8340

GTTTCGCCAA TAATATTCAT ACCCATGAAG GTGGAACACA TGAACAAGGT TTCCGTACAG      8400

CCTTGACACG TGTTATCAAC GATTATGCTC GTAAAAATAA GTTACTGAAA GACAATGAAG      8460

ATAATTTAAC AGGGGAAGAT GTTCGCGAAG GCTTAACTGC AGTTATCTCA GTTAAACACC      8520

CAAATCCACA GTTTGAAGGA CAAACCAAGA CCAAATTGGG AAATAGCGAA GTGGTCAAGA      8580

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CCAAACGTAT CGTAGAAAAA GGAATTTTGG CTGCCAAGGC TCGTGTGGCT GCCAAGCGTG      8700

CGCGTGAAGT CACACGTAAA AAATCTGGTT TGGAAATTTC CAACCTTCCA GGGAAACTAG      8760

CAGACTGTTC TTCTAATAAC CCTGCTGAAA CAGAACTCTT CATCGTCGAA GGAGACTCAG      8820

CTGGTGGATC AGCCAAATCT GGTCGTAACC GTGAGTTTCA GGCTATCCTT CCAATTCGCG      8880

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GTAGTCTTTT CACAGCCATG GGAACAGGAT TTGGCGCAGA ATTTGATGTT TCGAAAGCCC      9000

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TTGCCCAACC ACCAATCTAT GGTGTCAAGG TTGGAAGCGA GATTAAAGAA TATATCCAGC      9180

CGGGTGCAGA TCAAGAAATC AAACTCCAAG AAGCTTTAGC CCGTTATAGT GAAGGTCGTA      9240

CCAAACCGAC TATTCAGCGT TATAAGGGGC TAGGTGAAAT GGACGATCAT CAGCTGTGGG      9300

AAACAACCAT GGATCCCGAA CATCGCTTGA TGGCTAGAGT TTCTGTAGAT GATGTGCAGA      9360

AGCAGATAAA ATCTTTGATA TGTTGATGGG GATCGAGTTG TCCTCGTCG               9409
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(2) INFORMATION FOR SEQ ID NO: 162:

      (i) SEQUENCE CHARACTERISTICS:
           (A) LENGTH: 6415 base pairs
           (B) TYPE: nucleic acid

1049
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(C) STRANDEDNESS: double
(D) TOPOLOGY: linear


    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 162:

CCTGGGAAAG TCTTGAAAAT TATGATAGAA TGGTGGAAGG AAAAATTCAG GAGAGTAGTA        60

GTGACTCAAA ATGTTGAAAG TCTTCTCGTA TCCATTGTAA TCAGTGCATA CAATGAAGAA       120

AAATATCTGC CTGGTCTAAT TGAAGACTTA AAAAATCAAA CCTATCCTAA AGAGGATATT       180

GAAATTCTAT TTATAAATGC TATGTCCACA GATGGGACCA CAGCTATCAT TCAGCAATTT       240

ATAAAGGAAG ATACAGAGTT TAACTCAATT AGATTGTATA ACAATCCTAA GAAAAATCAA       300

GCTAGTGGTT TTAACCTGGG AGTTAAACAT TCTGTAGGGG ACCTTATTTT AAAAATTGAT       360

GCTCATTCAA AAGTTACTGA GACTTTTGTA ATGAACAATG TGGCTATTAT TCAACAAGGT       420

GAATTTGTCT GTGGGGGGCC TAGACCGACG ATTGTCGAAG GAAAAGGAAA ATGGGCAGAG       480

ACCTTGCATC TTGTTGAGGA AAATATGTTT GGCAGTAGCA TTGCCAATTA TCGAAATAGT       540

TCTGAGGATA GATATGTTTC TTCTATTTTT CATGGAATGT ATAAACGAGA GGTTTTCCAG       600

AAGGTTGGTT TAGTAAATGA GCAACTTGGC CGAACTGAAG ATAATGATAT TCATTATAGA       660

ATTCGAGAAT ATGGTTATAA AATCCGCTAT AGCCCAAGTA TTCTATCTTA TCAGTATATT       720

CGACCAACAT TCAAGAAAAT GCTGCATCAA AAGTATTCAA ATGGTTTGTG GATTGGCTTG       780

ACAAGTCATG TTCAGTTTAA GTGTTTATCA TTATTTCACT ATGTTCCTTG TTTATTTGTT       840

TTGAGTCTTG TGTTTAGTCT AGCATTGTTA CCGATCACAT TCGTATTCAT AACTTTACTA       900

TTAGGTGCCT ATTTTCTACT TTTGTCATTA CTCACTTTGC TGACTTTATT AAAACATAAA       960

AATGGATTTC TAATTGTGAT GCCCTTTATT TTATTTTCCA TTCACTTTGC TTATGGCCTT      1020

GGGACGATTG TAGGTTTAAT TAGAGGATTT AAATGGAAGA AGGAGTACAA GAGAACAATA      1080

ATTTATTTGG ATAAAATAAG CCAAATAAAT CAAAATATGC TATAATAACA ATATAGTAAA      1140

ACTCTTTTAA GGAGGAGTAG ATTTCTATGA ATAAAAAACT AACAGATTAT GTGATTGATC      1200

TGGTGGAAAT TTTAAATAAA CAACAAAAGC AGGTTTTCTG GGGAATATTT GATATTTTCA      1260

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CTGTTGACTA CATTATCTAT ACGAGTTTGG CCTTCCTGTT CTATCAATTG ATGATTGGTT      1380

TTTGGGGGTT GAACGCGAGC ATTAGTCGTT ACAGCAAGAT TACGGATTTC ATGAAAATCT      1440

TTTTTGGTGT GACTGCTAGC AGTGTCTTGT CATATAGTAT CTGTTATGCC TTCTTGCCAC      1500

TCTTCTCCAT CCGTTTCATC ATTCTCTTTA TCTTGTTGAG TACCTTCTTG ATTTTATTGC      1560
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                                    1050
CACGGATTAC TTGGCAGTTA ATCTACTCCA GACGCAAAAA AGGTAGTGGT GATGGAGAAC      1620

ACCGTCGGAC CTTCTTGATT GGTGCCGGTG ATGGTGGGGC TCTTTTTATG GATAGTTACC      1680

AACATCCAAC CAGTGAATTA GAACTGGTCG GTATTTTGGA TAAGGATTCT AAGAAAAAGG      1740

GTCAAAAACT TGGTGGTATT CCTGTTTTGG GCTCTTATGA CAATCTGCCT GAATTAGCCA      1800

AACGCCATCA AATCGAGCGT GTCATCGTTG CGATTCCGTC GCTGGATCCG TCAGAATATG      1860

AGCGTATCTT GCAGATGTGT AATAAGCTGG GTGTCAAATG TTACAAGATG CCTAAGGTTG      1920

AAACTGTTGT TCAGGGCCTT CACCAAGCAG GTACTGGCTT CCAAAAAATT GATATTACGG      1980

ACCTTTTGGG TCGTCAGGAA ATCCGTCTTG ACGAATCGCG TCTGGGTGCA GAACTGACAG      2040

GTAAGACCAT CTTAGTCACA GGAGCTGGAG GTTCAATCGG TTCTGAAATC TGTCGTCAAG      2100

TTAGTCGCTT CAATCCTGAA CGCATTGTCT TGCTCGGTCA TGGGGAAAAC TCAATCTACC      2160

TTGTTTATCA TGAATTGATT CGTAAGTTCC AAGGGATTGA TTATGTACCT GTGATTGCGG      2220

ACATTCAAGA CTATGATCGT TTGTTGCAAG TCTTTGAGCA GTACAAACCT GCTATTGTTT      2280

ATCATGCGGC AGCCCACAAG CATGTTCCTA TGATGGAGCA CAATCCAAAA GAAGCCTTCA      2340

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AGCGCGTGGC GGAGTTGATT GTCACTGGCT TTAACCAACG TAGCCAATCA ACCTACTGTG      2520

CAGTTCGTTT TGGGAATGTT CTTGGTAGCC GTGGTAGTGT CATTCCAGTC TTTGAACGTC      2580

AGATTGCTGA AGGTGGGCCT GTAACGGTGA CAGACTTCCG TATGACCCGT TACTTTATGA      2640

CCATTCCAGA AGCTAGCCGT CTGGTTATCC ATGCTGGTGC TTATGCCAAA GATGGGGAAG      2700

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AGTTCCGCAC TCTCAGTGGA GATGAGTTGA AGCAAGCTAT TATCGCCTTT GCTAATCAAA      3000

CAACCCACAT TGAATAAAAA AGAAAAACGC ATAGTATCAA GTTACACAAC CTTGGTAATA      3060

TGCGTTTTAT TATGTAGAGA CTTATACTCT TCGAAAATCT CTTCAAACCA CGTCAACGTC      3120

GCCTTGCCGT ATATGGTTAC TGACTtCGTC AGTTCTATCC ACAACCTCAA AACAGTGTTT      3180

TGAGytGACT TCGTCAGTTC TATCCACAAC CTCAAAACAG TGTTTTGAGc TGACtTCGTC      3240

AGTTCTATCC ACAACCTCAA AACAGTGTTT TGAGCTGAcT TCGTCAGTTC CATCCACAAC      3300

CTTAAAACAG TGTTTTGAGy TGACnTTCGT CAGTTCCATC TACAACCTTA AAACAGTGTT      3360
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1051

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TTGAGCTGCC CGCAGCTAGT TTCCTAGTTT GCTCTTTGAT TTTCATTGAG TATTACTTCA      3420

TTTTCTTCTG AAATGGAATT GTTACCCAGT CTATGCTATT GAAAATACGC CAAAACTTCT      3480

AAGGGTTTGT GAGCGATATA ATCAGGTTGA TAGTTTAGTA GATCTGCTTG CTCTCCAAAT      3540

CCCCAAGTGA TGGCCAATTT CTGAATACCT GTTTCTCGAG. CTCCCAGCAT ATCAAACTTG      3600

GTATCTCCGA TGATGATGGC TTGTTCTGGT GCTAGTTGAT GTGTCTGCAA GGCTTGGTGA      3660

ATGACATCTG CCTTATGGGG TGCTTCAGGG CTAGAACCAT AAATGCCATC AAAGAAATGA      3720

TGGATTTCCA AGTTTTTTGC CATGTCTTGA GCAGTAGATG TATCCTTTGT CGTGGTGATG      3780

TAGAGTGGAT AACTGCTCGA TAACTCCTCA AGCAAGTCTA TAATCTGAGG AAAGAGTTGA      3840

GCTTCATAGA TGCCTTTTGC CTTATAGTAA GAACGATATA TCTGCACGGC TTCAGAAATT      3900

TGGTCTTTGG ACAGGCAGGT CGCAAAACTA CTTTCGAGAG GTGGTCCCAT AAAACCACGA      3960

ATAGTTTTGG CATCAGGGCT AGGCACCCCC AGCTCTTTAA AGGTATAGGT AAAGGCATTG      4020

TGAATCCCGA TAGAACTATC AACGAGGGTT CCATCCAAAT CGAAAAAAAT CGCTGTGATA      4080

GAGGTCATGG TTTCTCCTAT TTGATAAGCT TATTCTCCGA AAATTTCTTT TTGGAGGCGA      4140

CGACCAGTAG GGGTGGTAGC GAGTCCACCT TCAGCTGTTT CACGAAAGGC AGTTGGCATG      4200

CTTGCTCCTA CTTGGTACAT GGCATCGATC ACTTCATCCA CAGGGATTTT AGATTCGATA      4260

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AATTGTTGCT CGTGGCTGAG GTCTAATTTT TCAATAGCAG CAGTGAGAAC GGATGGCAGA      4620

CAGCCAGCAC TTCCAGCGGT TGGAGTGGCA CAGACCAAGC CCATTTTGGC ATTGTGTTCA      4680

TTGACTGCGA TGGCATTTCG GGCAGCCGAG AGAATCGTAT AATCTGACAG AGTTTTTCCG      4740

TTTTCGATGT AGTGATCCAA TTTGGCAGCA TCTCCACCTG TCAGGCCACT ACGAGATTTA      4800

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GCGACATTTC CTTGAAAGTC CAGATCTGCT TGCTCGACCA ATTCTTTGAT AGAATAAAAC      4980

ATGCTTCCTC CTATTTAAAG AAATTGACAT TGTGGAGATG AGGGATTTTT CGAATTTCTT      5040

CGATAGCCTC ATCACAGTTG CGACTGTCAA CTTCGATAAT CATAATGGCT TTTTCACCAG      5100
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1052

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CTTTTTCACG AGTGACATTC ATCTGGGCGA TATTGATACC ATAGCGGGAA AGCGCCTCTG        5160

TAACAAGGGC AATCATACCT GGAATATCTT GATGAACGAT GATGATAGTC GGTGTATTCA        5220

TATTGAGAGA GACGGCAAAA CCATTGAGTT CGGTTACCTG AATATTTCCT CCACCGATAG        5280

AAATACCAGT CACGCTGATG GTCTTGTGGG CATTTTTAAC AGTAATTTTA GTGGTGTTAG        5340

GGTGAGGGGC ATTGCTGTCT TTCTGAATGG TCCAGACAAT CTTGATACCA CGCTTGTGGG        5400

CAATTTCCAG ACTATTTGGA ATTTCAGGAT CATCTGTATC CATTCCTAAA ATACCTGCAA        5460

CAAGGGCTAG GTCTGTTCCG TGACCACGAT AGGTCTTGGC AAATGAGTTA AAAAGTTGGA        5520

ATTCAACTTC TGTCGGAGTA TCATCAAAAA TGGAAGAGAC AATCTTCCCA ATACGAACAG        5580

CACCAGCGGT ATGGCTACTA GATGGGCCAA TCATAACTGG TCCGATGATA TCAAAGACAG        5640

ATTGAAAACG AAGTGATTTC ATCAGTTTCC CCTTATAAAA ATTCTTATCT CTATTATATC        5700

AAAGAATGAG GGGCTTGGCT TTAATTGTGG ATGAAAACCT TTCTAATACC TCAAATAGCA        5760

TAAAAATAGT ATCTTTTATG ACAAAAAACA CCTTATTTAG GGAAATAAAA AATAATTTTG        5820

TAATATTTCT ACATAAAAGT GTCAAGAAAC GGTAATATTT AAAGGGTATG ATAGAACTAT        5880

AGAAAGAAGG AGAATTTTCG AATATGAAAT CAATAACTAA AAAGATTAAA GCAACTCTTG        5940

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AAGAGTTGGT TATCGATGGC CCTGTAGCGC CTGTTGCAAC ACCAGCGCCA GCTACTTATG        6180

CGGCACCAGC CGCTCAAGAT GAAACTGTTT CAGCTCCAGT AGCAGAAACT CCAGTAGTAA        6240

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AAAAAGAATC AGGTGGTAGT ATACAGCTAC AAATGGACGT TATATCGGAC GTTACCAATT        6360

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(2) INFORMATION FOR SEQ ID NO: 163:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 8494 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: double
       (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 163:

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TACCCCTTTC GAATTTTGGC AAAAATTCGG TAAGGCTTTG ATGGTAGTTA TCGCGGTTAT        60

GCCGGCTGCT GGTTTGATGA TTTCAATCGG TAAGTCTATC GTGATGATTA ACCCAACCTT        120
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1053

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TGCACCACTT GTCATCACAG GTGGAATTCT TGAGCAAATC GGTTGGGGGG TTATCGGTAA          180

CCTTCACATT TTGTTTGCCC TAGCCATTGG AGGAAGCTGG GCTAAAGAAC GTGCTGGTGG          240

TGCTTTCGCC GCTGGTCTTG CCTTCATCTT GATTAACCGT ATCACTGGTA CAATCTTTGG          300

TGTATCAGGC GATATGTTGA AAAATCCAGA TGCTATGGTA ACTACTTTCT TTGGTGGTTC          360

AATCAAAGTT GCTGATTACT TTATCAGTGT TCTTGAAGCT CCAGCCTTGA ACATGGGGGT          420

ATTCGTAGGG ATTATCTCAG GTTTTGTAGG GGCAACTGCT TACAACAAAT ACTACAACTT          480

CCGTAAACTT CCTGATGCAC TTTCATTCTT CAACGGGAAA CGTTTCGTAC CATTTGTAGT          540

TATTCTTCGT TCAGCAATCG CTGCAATTCT ACTTGCTGCT TTCTGGCCAG TAGTTCAAAC          600

AGGTATCAAT AACTTCGGTA TCTGGATTGC CAACTCACAA GAAACTGCTC CAATTCTTGC          660

ACCATTCTTG TATGGTACTT TGGAACGTTT GCTCTTGCCA TTTGGTCTTC ACCACATGTT          720

GACTATCCCA ATGAACTACA CAGCTCTTGG TGGTACTTAT GACATTTTAA CTGGTGCAGC          780

TAAAGGTACT CAAGTATTCG GTCAAGACCC ACTATGGCTT GCATGGGTAA CAGACCTTGT          840

AAACCTTAAA GGTACTGATG CTAGTCAATA TCAACACTTG TTAGATACAG TACATCCAGC          900

TCGTTTCAAA GTTGGACAAA TGATCGGTTC ATTCGGTATC TTGATGGGTG TGATTGTTGC          960

TATCTACCGT AATGTTGATG CTGACAAGAA ACATAAATAC AAAGGTATGA TGATTGCAAC         1020

AGCTCTTGCA ACATTCTTGA CAGGGGTTAC TGAACCAATC GAATACATGT TCATGTTCAT         1080

CGCAACACCT ATGTATCTTG TTTACTCACT TGTTCAAGGT GCTGCCTTCG CTATGGCTGA         1140

CGTCGTAAAC CTACGTATGC ACTCATTCGG TTCAATCGAG TTCTTGACTC GTACACCTAT         1200

TGCAATCAGT GCTGGTATTG GTATGGATAT CGTTAACTTC GTTTGGGTAA CTGTTCTCTT         1260

TGCTGTAATC ATGTACTTTA TCGCAAACTT CATGATTCAA AAATTCAACT ACGCAACTCC         1320

AGGGCGCAAC GGAAACTACG AAACTGCTGA AGGTTCAGAA GAAACCAGCA GCGAAGTGAA         1380

AGTTGCAGCA GGCTCTCAAG CTGTAAACAT TATCAACCTT CTTGGTGGAC GTGTAAACAT         1440

CGTTGATGTT GATGCATGTA TGACTCGTCT TCGTGTAACT GTTAAAGATG CAGATAAAGT         1500

AGGAAATGCA GAGCAATGGA AAGCAGAAGG AGCTATGGGT CTTGTCATGA AAGGACAAGG         1560

GGTTCAAGCT ATCTACGGTC AAAAGCTGA CATTTTGAAA TCTGATATCC AAGATATCCT         1620

TGATTCAGGT GAAATCATTC CTGAAACTCT TCCAAGCCAA ATGACTGAAG CACAACAAAA         1680

CACTGTTCAc TTCAAAGATC TTACTGAGGA AGTTTACTCA GTAGCAGACG GTCAAGTTGT         1740

TGCTTTGGAA CAAGTAAAGG ATCCAGTATT TGCTCAAAAA ATGATGGGTG ATGGATTTGC         1800

AGTAGAACCT GCAAATGGAA ACATTGTATC TCCAGTTTCA GGTACTGTGT CAAGCATCTT         1860
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                                1054
CCCAACAAAA CATGCTTTTG GTATTGTGAC GGAAGCAGGT CTTGAAGTAT TGGTTCACAT    1920

TGGTTTGGAC ACAGTAAGTC TTGAAGGTAA ACCATTTACA GTTCATGTTG CTGAAGGACA    1980

AAAAGTTGCA GCAGGAGATC TCCTTGTCAC AGCTGACTTG GATGCTATCC GTGCAGCAGG    2040

ACGTGAAACT TCAACAGTAG TTGTCTTCAC AAATGGTGAT GCAATTAAAT CAGTTAAGTT    2100

AGAAAAAACA GGTTCTCTTG CAGCTAAAAC AGCAGTTGCT AAAGTAGAAT TGTAATATAC    2160

TTGAGGTTGG AAGCTGTATT CCAACCTCTT ATTTTGGGAG AAAAGAATGA AATTTTTAAC    2220

ACTCAATACT CACAGTTGGA TGGAGAAAGA AGCAGAGGAA AAATTCCAGA TTTTGCTTGA    2280

AGATATTCTT GAAAAGGACT ATGATTTGAT TTGTTTTCAA GAAATCAATC AGGAGATGAC    2340

CTCGTCAGAG GTGGAGGTTA ATGACCTTTA TCAAGCTTTG CCAGCAGCTG AGCCTATTCA    2400

CCAAGACCAT TATGTTAGAC TCTTGGTTGA AAAGTTGTCT GAGCAAGGGA AAAATTACTA    2460

CTGGACCTGG GCCTATAACC ATATCGGCTA TAACCGCTAC CACGAAGGTG TGGCTATCTT    2520

GTCTAAAACA CCTATTGAAG CCAGAGAAAT TTTGGTTTCA GATGTGGATG ATCCAACAGA    2580

CTATCATACT CGCCGTGTTG CCCTAGCTGA AACTGTAGTC GATGGCAAGG AGCTAGCAGT    2640

TGCCAGTGTT CATCTCTCTT GGTGGGATAA AGGTTTCCAA GAAGAATGGG CACGATTTGA    2700

GGCTGTCTTG AAAAAATTGA ACAAGCCACT TTTACTAGCT GGAGATTTCA ACAATCCGGC    2760

TGGACAGGAA GGTTACCAAG CTATTTTAGC TAGTCCATTA GGCTTACAAG ACGCATTTGA    2820

AGTTGCTCAA GAGAAAAGTG GTAGCTATAC TGTTCCGCCT GAAATTGATG GCTGGAAAGG    2880

GAACACTGAA CCCCTTCGAA TCGATTATGT CTTTACTACC AAAGAGTTAG CGGTGGAAAA    2940

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TGCTATATTA AACTGGAAAT AATAACTGAA AAGAGGTTGG AACTATAAAA TTCCAGCCTT    3060

TTCTTACTAG AGAAGCTACT GGAAATAGCC TAAATAAGTG AGACTACTGT AATGGAATAA    3120

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AATTTAAAAA CTATATTAGA GAAGCCTTGA AGGAGTTAAA ATTTACAACT CCAACAGAGG    3240

TGCAAGACAA GTTGATTCCT ATTGTTTTGG CAGGTCGTGA CCTAGTAGGA GAATCAAAAA    3300

CAGGTTCAGG TAAGACTCAT ACTTTCTTGT TACCGATTTT CCAGCAATTA GATGAAGCTA    3360

GCGATAGTGT ACAAGCAGTG ATTACTGCAC CGAGTCGTGA GTTGGCTACT CAAATTTACC    3420

AAGTAGCGCG TCAGATTTCA GCTCACTCAG ATGTCGAAGT TCGTGTGGTT AATTATGTGG    3480

GTGGTACGGA TAAGGCTCGC CAGATTGAGA AATTGGCAAG CAATCAGCCT CATATTGTTA    3540

TTGGAACACC AGGCCGTATC TACGACTTGG TTAAATCTGG TGATTTAGCT ATTCATAAAG    3600

CCAAGACATT TGTTGTTGAT GAAGCAGATA TGACCTTGGA TATGGGATTC TTGGAAACTG    3660
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1055

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TTGATAAGAT TGCTGGCAGT CTTCCAAAAG ACTTGCAATT CATGGTCTTC TCAGCGACTA    3720

TCCCACAAAA ACTGCAACCA TTCTTGAAAA AATACTTATC AAATCCTGTT ATGGAGAAAA    3780

TTAAGACCAA AACGGTTATT TCTGACACCA TTGATAATTG GTTGATTTCG ACCAAGGGAC    3840

ATGATAAGAA TGCTCAAATT TACCAGTTGA CTCAGTTGAT GCAGCCGTAT TTGGCAATGA    3900

TTTTTGTTAA CACTAAAACG CGTGCTGATG AATTGCATTC ATATCTGACT GCTCAAGGCT    3960

TGAAGGTTGC AAAAATCCAT GGCGATATTG CCCCTCGTGA ACGCAAGCGA ATCATGAATC    4020

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ACATTGAAGG TGTCAGCCAT GTCATCAATG ATGCCATTCC GCAAGACTTA TCTTTTTTTG    4140

TTCATCGTGT TGGTCGTACT GGACGAAATG GCCTACCAGG TACAGCTATT ACCCTTTATC    4200

AGCCAAGTGA TGACTCGGAT ATCCGTGAGT TGGAGAAATT GGGAATCAAG TTTAGTCCTA    4260

AGATGGTCAA AGACGGGGAA TTTCAAGATA CCTATGACCG TGATCGTCGT GCCAACCGTG    4320

AGAAAAAACA AGATAAACTT GATATCGAAA TGATTGGTTT GGTTAAAAAG AAAAAGAAAA    4380

AAGTCAAACC GGGTTATAAG AAGAAAATTC AATGGGCGGT TGATGAAAAG CGCCGTAAAA    4440

CCAAGCGTGC TGAAAATCGC GCTCGCGGTC GTGCAGAGCG TAAAGCTAAA CGCCAAACAT    4500

TTTAATAGAA ATTGTTGGAG TATTGAGCTC CAACTTTTTT ATTTATGAGA ACGAACTATC    4560

TAAACCGAAA CACTACATTA AAGACTGCAA ATTGCCATTA AAAATGCTAT AATGATAAAG    4620

TTATATAGTC CCGATAAGAT GGTAGGTATT TATTACGAAG AGTTTTCCTA TCAGTACTTT    4680

GTAACTCTAT AACAATATTT TTTAAGGGGG GACATTTTTA TGTCAGAGCG TAAATTATTC    4740

ACGTCTGAAT CTGTATCTGA GGGGCATCCG GATAAGATTG CAGACCAAAT TTCAGATGCG    4800

ATTTTGGATG CTATTTTAGC AAAGGATCCA GAGGCGCACG TTGCTGCTGA AACAGCTGTA    4860

TATACTGGTT CTGTCCACGT TTTTGGTGAA ATTTCTACAA ATGCCTATGT GGATATTAAC    4920

CGTGTGGTTC GTGATACCAT TGCAGAGATT GGTTATACCA ATACAGAATA TGGATTTTCT    4980

GCTGAGACGG TGGGAGTACA CCCATCTTTG GTGGAACAAT CTCCTGACAT CGCTCAAGGT    5040

GTTAACGAAG CCTTGGAGGT TCGTGGAAAT GCTGATCAAG ATCCACTGGA CTTGATTGGA    5100

GCAGGTGACC AAGGGCTCAT GTTTGGATTT GCAGTAGATG AAACAGAAGA GCTTATGCCA    5160

TTGCCAATTG CACTCAGTCA TAAATTGGTT CGTCGTCTGG CAGAACTTCG TAAGTCTGGA    5220

GAAATTAGCT ATCTCCGTCC AGATGCAAAA TCACAAGTTA CAGTTGAGTA CGATGAAAAT    5280

GACCGTCCGG TACGTGTAGA TACAGTCGTT ATTTCTACTC AGCATGATCC AGAGGCCACT    5340

AATGAACAAA TCCATCAAGA TGTGATTGAC AAGGTCATCA AAGAAGTTAT TCCATCTTCT    5400
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                                      1056
TATCTTGATG ATAAGACAAA ATTCTTTATC AATCCGACAG GTCGTTTTGT AATCGGTGGT          5460

CCTCAAGGGG ACTCAGGTTT GACTGGTCGT AAGATTATTG TAGATACTTA TGGTGGCTAC          5520

TCTCGTCATG GTGGTGGTGC CTTCTCTGGT AAAGATGCGA CTAAGGTGGA TCGTTCAGCC          5580

TCTTATGCGG CTCGCTATAT TGCCAAGAAT ATCGTTGCAG CAGACCTTGC TAAGAAGGCA          5640

GAAGTGCAGT TGGCCTATGC TATCGGTGTT GCGCAACCTG TTTCTGTTCG TATCGATACT          5700

TTCGGTACAG GAACAGTAGC TGAAAGTCAA CTTGAAAAAG CGGCTCGTCA AATCTTTGAC          5760

CTTCGCCCTG CAGGGATTAT CCAAATGCTG GACCTCAAGC GTCCAATTTA CCGTCAAACA          5820

TCGGCTTACG GTCACATGGG ACGTACAGAT ATTGATCTTC CATGGGAACG TTTGGATAAG          5880

GTAGATGCTT TGAAAGAAGC AGTAAAATAA GATTTTAAGA GGGGAACGTC CTCTCTTTTT          5940

TATAGTTTTT AACTATACTG GGATACTGTT CTGAAAATCC ATTTTGCGAA AGTAGAGATT          6000

TACATGTATA GTAGATTGAA ACTAGAATAG TACACCTCAA CTTCTAAAAC ATTGTTAGCA          6060

ATCAATTTGA CTGTCCTGAT CGATTTCTCC TGTTCTTGTT TCATTTTACT ATATTTCTTT          6120

AAAAATGATA AAGGTTAAGA TTTCTCCTCG TAATAGATAA TCTTGGGGAT ATTTCAATCC          6180

AAAGTTTTAT TCGTTATCAC TTGACTATTG CAAGGTTTTC TAGAGCAACA GAGTCATGGA          6240

ATGGACTCAT GGTTGAGATT TCTCCTTGTT GCTTGGACTT CATTCAAAAG TCTGTTACCC          6300

AAGCCTTGTT CAAACTTCTA ATACACTAGC TGTTTCCATA GCATGACTTC TGTACTAGAC          6360

TTTCTTTTCC GAATAAATAG ATAGAACCAC AGAATCTAGT AAACCTAGAA TTAAAATTAT          6420

GGTATAATAT TAGCAATAAA AGAAATCTGG AGGATTAGAA TCATGGTATC AACGAAAACA          6480

CAAATTGCTG GTTTTGAGTT TGACAATTGC TTGATGAATG CAGCAGGTGT GGCTTGTATG          6540

ACGATAGAGG AGTTAGAAGA GGTCAAAAAC TCAGCGGCAG GAACCTTTGT TACTAAGACA          6600

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TCCATCAACT CTATGGGCTT GCCAAATAAT GGCTTAGACT ATTATTTGGA TTATCTTTTA          6720

GATTTGCAGG AAAAAGAGTC GAACCGAACT TTCTTCTTAT CTCTGGTCGG CATGTCTCCA          6780

GAGGAAACCC ATACTATTTT GAAAAAAGTC CAAGAGAGTG ATTTTCGTGG TCTGACTGAG          6840

CTAAATCTTT CCTGTCCAAA TGTTCCAGGT AAACCTCAGA TTGCCTATGA TTTTGAGACA          6900

ACAGACCGGA TTTTGGCAGA AGTGTTTGCT TACTTCACCA AACCTCTTGG AATTAAATTG          6960

CCACCTTATT TTGATATTGT TCACTTTGAC CAAGCGGCAG CTATTTTCAA CAAATATCCG          7020

CTCAAGTTTG TCAACTGCGT TAACTCTATC GGAAACGGCC TCTATATAGA AGACGAATCT          7080

GTCGTTATTC GGCCTAAGAA TGGTTTTGGT GGAATTGGTG GAGAATACAT CAAACCGACT          7140

GCTTTAGCCA ATGTTCACGC CTTTTATCAA CGTTTAAATC CTCAAATCCA AATTATCGGA          7200
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1057

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ACAGGTGGCG TTCTGACTGG TCGAGATGCC TTTGAACACA TCCTCTGTGG AGCAAGTATG        7260

GTGCAGGTGG GAACGACCCT TCACAAAGAA GGCGTCAGTG CTTTTGACCG CATTACCAAT        7320

GAACTGAAAG CAATCATGGT GGAAAAAGGC TACGAGAGCT TAGAAGATTT CCGTGGGAAA        7380

TTGCGCTATA TTGACTAAAT TAAATCGAAA AATCTGAAGA AAGGAGAGAC GATGCTAGCC        7440

ATTGAAGAAA GTCAGAAGTT GACTTTATCA AATTTACCGA GCCTGAGCCT ATTTACAGGG        7500

ACAGATCAGG GTCAGTTTGA AGTGATGAAG AGTCAAATGT TGAAACAGAT TGGGTATGAT        7560

TCTGCTGACC TCAACTTTGC CTACTTTGAT ATGAAAGAAG TAGTTTACAA GGATGTGGAA        7620

CTGGAGTTGG TCAGCCTTCC TTTCTTTGCG GATGAGAAAA TCGTGATATT AGATTATTTT        7680

ATGGATATCA CGACTGCTAA GAAACGCTTT TTGACAGATG ATGAGCTTAA GTCATTTGAG        7740

GAATACCTTG ACAATCCTTC TCCAACAACC AAGTTGATAA TCTTTGCAGA AGGAAAGCTG        7800

GATAGCAAAA GACGGTTAGT CAAATTACTT AAGCGTGATG CCAAGGCCTT CGATGCAGTA        7860

GAAGTAAAAG AACAAGAATT GCGCCAGTAC TTCCAAAAGT GGAGTCAGAA ACAAGGTCTG        7920

CAGTTTACCA ATCATTCTTT TGAAAATCTC CTCATCAAGT CGGGGTTTCA ATTTAGCGAA        7980

ATCCAGAAAA ATCTTCTCTT TTTACAGTCC TATAAGGCGA ATTCTGTTAT TGAGGAAGAG        8040

GATATTGTTA ACGCAATTCC CAAGACTTGC AGGACAATAT TTTTGATTTA ACTCAGTTTA        8100

TTCTGACTAA AAAGATGGAT CAGGCGCGCG ATTTGGTGAG AGACTTGACC TTGCAAGGGG        8160

AAGATGAAAT CAAACTGATT GCAGTCATGC TGGGACAATT TCGGACTTTT ACTCAGGTGA        8220

AGATTTTGGC GGAGTCTGGC CAAACAGAAT CGCAGATTGC AAGTAGTTTA GGTAGTTATC        8280

TGGGACGTAA CCCAAATCCT TATCAAATCA AGTTTGCATT AAGAGATTCG AGAGGACTTT        8340

CTTTGAGCTT TTTGAAGCAA GCTATTTCCT ATTTGATTGA GACAGACTAT CAGATTAAGA        8400

CAGGTCTTTA TGAAAAAGGT TTCCTTTTTG AAAAGGCACT CTTACAGATT GCTAGTCAGG        8460

TCAATTGACA TTTGTTGAAA CTACTAACCC GCGG                                   8494
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(2) INFORMATION FOR SEQ ID NO: 164:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 9707 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 164:

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CCGGTCAGTT CGTTCAGTAC AAGGAATCAT AATGAACGAT CAATCAGAAA AAAAGACTAG          60
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1058

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AAAGAAGACT GTATGGATAA TCGACCAATT GGTTTTTTGG ATTCGGGTGT CGGGGGCTTG      120

ACCGTTGTGC GCGAGCTCAT GCGCCAGCTT CCCCATGAAG AAATCGTCTA TATTGGAGAT      180

TCGGCGCGGG CGCCCTATGG CCCCCGTCCT GCTGAGCAAA TTCGTGAATA TACTTGGCAG      240

CTGGTCAACT TTCTCTTGAC CAAGGATGTC AAAATGATTG TCATTGCTTG TAACACTGCG      300

ACTGCGGTCG TCTGGGAAGA AATCAAGGCT CAACTAGATA TTCCTGTCTT GGGTGTAATT      360

TTGCCAGGAG CTTCGGCAGC CATCAAGTCC AGTCAAGGTG GGAAAATCGG AGTGATTGGA      420

ACGCCCATGA CGGTACAATC AGACATATAC CGTCAGAAAA TCCATGATCT GGATCCCGAC      480

TTACAGGTGG AGAGCTTGGC CTGTCCCAAG TTTGCTCCCT TGGTTGAGTC AGGTGCCCTG      540

TCAACCAGTG TTACCAAGAA GGTGGTCTAT GAAACCCTGC GTCCCTTGGT TGGAAAGGTG      600

GATAGCCTGA TTTTGGGCTG TACTCATTAT CCACTCCTTC GCCCTATTAT CCAAAATGTG      660

ATGGGGCCAA AGGTTCAGCT CATCGATAGT GGGGCAGAGT GCGTACGGGA TATCTCAGTC      720

TTACTCAATT ATTTTGAAAT CAATCGTGGT CGCGATGCTG GACCACTCCA TCACCGTTTT      780

TACACAACAG CCAGTAGCCA AAGTTTTGCA CAAATTGGTG AAGAATGGCT GGAAAAAGAG      840

ATTCATGTGG AGCATGTAGA ATTATGACAA ATAAAATTTA TGAATATAAG GATGACCAGG      900

ACTGGTATGT TGGGTCTTAT AGTATTTTTG GTGGCGTTAA CAGTTTGAGC GACTATAAGA      960

CAGATTTTCC TCTGTTTGAA TTCTCCAAAA TATTTGGAGA TGAAGAGTAT GGTTTCCCGC     1020

TTTCAGTTAC TGTTTTACGC TATGGTTCTA TCTACCGTTT GTTCTCCTTT GTGGTAGACA     1080

TGCTTAATCA AGAAATGGGA CGAAACTTGG AAGTTATTCA ACGTCATGGG GCCCTGCTCT     1140

TGGTTGAAAA TGGGCAACTC TTGTATGTAG AATTGCCTAA AGAAGGGGTC AATGTTCATG     1200

ATTTCTTTGA GACAAGCAAG GTCAGAGAAA CCTTGTTGAT TGCGACTCGT AACGAAGGTA     1260

AAACCAAGGA ATTCCGAGCT ATCTTTGATA AGTTAGGCTA CGATGTGGAA AATCTTAATG     1320

ACTACCCTGA CCTGCCTGAA GTAGCAGAAA CAGGTATGAC CTTTGAAGAA AATGCCCGCC     1380

TTAAGGCAGA AACCATTTCT CAATTAACGG GCAAGATGGT TTTGGCAGAT GATTCTGGTC     1440

TCAAAGTCGA TGTCCTTGGT GGCTTACCAG GCGTCTGGTC AGCTCGTTTC GCAGGTGTGG     1500

GAGCAACTGA CCGTGAAAAT AATGCCAAAC TCTTGCACGA ATTGGCCATG GTCTTTGAAC     1560

TCAAGGACCG CTCGGCTCAG TTCCACACAA CCCTAGTCGT AGCCAGCCCA AATAAGGAAA     1620

GTTTAGTTGT TGAAGCAGAC TGGTCAGGTT ATATTAACTT TGAACCTAAG GGTGAAAATG     1680

GCTTTGGCTA TGATCCCCTC TTCCTTGTAG GAGAAACAGG TGAGTCATCA GCTGAATTAA     1740

CCCTGGAAGA AAAAAATAGT CAATCTCACC GTGCCTTAGC CGTTAAGAAA CTTTTTGGAGG     1800

TATTTCCATC ATGGCAAAGC AAACCATCAT TGTAATGAGC GATTCCCATG GCGATAGCTT     1860
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1059

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GATTGTGGAA GAAGTCCGTG ATCGCTATGT GGGCAAAGTC GATGCTGTTT TTCATAACGG    1920

CGATTCTGAA CTACGTCCGG ATTCTCCACT TTGGGAGGGC ATCCGCGTTG TTAAAGGGAA    1980

CATGGACTTC TACGCCGGCT ACCCAGAACG TCTGGTGACT GAGCTTGGTT CGACCAAGAT    2040

TATCCAAACT CATGGTCACT TGTTTGACAT CAATTTCAAC TTTCAAAAGT TGGACTACTG    2100.

GGCTCAGGAG GAAGAGGCCG CTATCTGCCT CTATGGTCAC TTGCATGTGC CAAGTGCTTG    2160

GTTGGAAGGC AAGATCCTCT TTCTAAATCC AGGTTCTATC AGTCAACCAC GAGGTACCAT    2220

CAGAGAATGT CTCTATGCTC GTGTGGAGAT TGATGATAGT TACTTCAAAG TGGACTTTTT    2280

GACACGAGAT CACGAGGTGT ATCCAGGTTT GTCCAAGGAG TTTAGCCGAT GATTGCCAAG    2340

GAGTTTGAGA CTTTCTTGTT GGGGCAGGAG GAAACTTTTT TGACCCCTGC TAAAAATCTA    2400

GCTGTGTTGA TTGATACCCA CAATGCGGAT CATGCGACCC TCTTGCTCAG TCAGATGACC    2460

TATACCCGTG TTCCCGTTGT GACAGATGAA AAACAGTTTG TTGGGACGAT TGGACTCAGA    2520

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ATCGTTCATA TGACAAAAAC GGACGTAGCG GTTGTTTCGC CTGATTTCAC CATTACGGAG    2640

GTCTTGCACA AGCTAGTAGA TGAGTCCTTC TTACCGGTTG TGGATGCAGA GGGTATTTTC    2700

CAAGGGATTA TTACGCGCAA GTCCATCCTC AAGGCCGTTA ATGCCCTCTT GCATGACTTT    2760

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ACATGGTAGG TGAGCGGATT TCTGAGACCA GTCTCAAGAT TTACCAAGCC CAGCTAGCCA    2940

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GGCAGACCTA TCTTTTTGAA AGAGGAGAGA AACCCTATTC TCGTCAGTGG GCCTTTCGTC    3360

AGTTAGAATC TTTTGTCAAG GAGAAAGGTT TTCCATCCTT ATCAGCTCAA GTCTTACGTG    3420

AACAGTTTAT TCTAAGACAA ATAGAAAACA AGGTCGATTT GTACGAAATT GCAAAAAAAT    3480

TAGGATTAAA AACAGTCCTG ACCTTAGAAA AATATAGATA ATGGATATTA AATTAAAAGA    3540

TTTTGAAGGA CCCCTGGACT TGCTCTTGCA TCTGGTTTCT AAGTACCAGA TGGATATCTA    3600
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                              1060
CGATGTGCCC ATTACGGAAG TCATCGAACA GTATCTAGCC TATGTCTCAA CCCTGCAGGC        3660

CATGCGTCTG GAAGTGACGG GTGAGTACAT GGTCATGGCT AGTCAGCTCA TGCTGATTAA        3720

GAGTCGTAAA CTCCTTCCGA AGGTAGCAGA AGTGACAGAC TTGGGGGATG ACCTGGAGCA        3780

GGACCTCCTC TCTCAAATCG AAGAATATCG CAAGTTCAAG CTCTTGGGTG AGCACTTGGA        3840

AGCCAAGCAC CAAGAACGGG CCCAGTATTA TTCCAAAGCG CCGACAGAGT TGATTTACGA        3900

AGATGCGGAG CTTGTGCATG ACAAGACGAC CATTGACCTC TTTTTGACTT TTTCAAATAT        3960

CCTAGCCAAG AAAAAGAGG AGTTTGCACA AAATCACACG ACGATCTTGC GGGATGAGTA         4020

TAAGATTGAG GACATGATGA TTATCGTGAA AGAGTCCTTG ATTGGACGAG ATCAATTGCG        4080

CTTGCAGGAT TTGTTCAAGG AAGCCCAGAA TGTCCAAGAG GTCATCACCC TCTTTTTGGC        4140

AACCCTAGAG TTAATCAAAA CCCAGGAGTT GATCCTCGTG CAAGAGGAGA GTTTTGGAGA        4200

TATCTATCTC ATGGAAAAGA AGGAAGAAAG TCAAGTGCCT CAAAGCTAGA CTTGATAGAG        4260

AGGAAAGATG AGTACTTTAG CAAAAATAGA AGCGCTCTTG TTTGTAGCGG GTGAAGATGG        4320

GATTCGGGTC CGCCAGTTAG CTGAACTCCT CTCTCTGCCA CCGACAGGCA TCCAGCAAAG        4380

TTTAGGAAAA TTAGCCCAGA AGTATGAAAA GGACCCAGAT TCCAGTTTGG CTTTGATTGA        4440

GACAAGTGGT GCTTATAGAT TGGTGACCAA GCCTCAATTT GCAGAGATTT TGAAGGAATA        4500

CTCTAAGGCG CCTATCAACC AGAGCTTGTC TCGGGCTGCC CTTGAGACCT TGTCCATTAT        4560

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TGGAGCCTTG GCAAAGTTGC AGGCTTTTGA CCTGATAAAG GAAGACGGGA AAAAGGAAGT        4680

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CTATCTACAA CGAAGAAAAG GTCTACTATC TGCTTAACAA ACCACGCGGT GTGATTTCCA        5040

GTGTGACAGA TGATAAGGGT CGCAAGACGG TTGTCGACCT CTTGCCCAAT GTCAAAGAGC        5100

GTATTTACCC TGTGGGTCGT TTGGACTGGG ATACATCAGG TGTCTTGATT TTGACCAATG        5160

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CGCGTGTTAA AGGTGTGGCC AATAAGGACA ATCTCCGCCC CTTGACCCGT GGTCTTGAGA        5280

TTGATGGTAA GAAAACCAAG CCAGCTGTTT ATGAAATTCT CAAAGTGGAC CCAGTCAAAA        5340

ATCGCTCTGT GGTGCAGTTG ACCATCCATG AAGGGCGTAA CCATCAGGTT AAAAAGATGT        5400
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1061

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TTGAAGCTGT TGGTCTCCAA GTAGATAAGT TGTCTCGGAC TCGTTTCGGA CACCTAGACT     5460

TGACAGGACT CCGTCCAGGA GAATCCCGTC GTCTTAATAA AAAAGAAATC AGCCAACTAC     5520

ACACCATGGC TGTAACTAAG AAATAATGAA ACGAATTTTA ATAGCGCCTG TGCGCTTTTA     5580

CCAACGTTTT ATCTCACCAG TCTTTCCACC CTCTTGTCGC TTTGAGCTGA CTTGTTCCAA     5640

CTACATGATT CAGGCTATTG AAAAACATGG GTTTAAGGGG GTATTGATGG GCTTGGCTCG     5700

GATTTTACGT TGTCATCCCT GGTCGAAAAC AGGTAAGGAC CCCGTTCCAG ACCGCTTTTC     5760

CCTTAAACGA AATCAAGAAG GGGAATGAGG TGGGGTAAAT AGATTTCAAA ATGATAAAAA     5820

CGCATCCTAT CAGGTTTGAG TGAACTTGAT AGGATGCGTT TTAGAATGTC AAAATTTTAT     5880

ACTCTTCGAA AATCTCTTCA AACCGCGTCA GCTTTCATCT GCAACCTCAA AACAGTGTTT     5940

TGAGCAACCT GCGGCTAGTT TCCTAGTTTG CTCTTTGATT TTCATTGAGT ATTAAATTGA     6000

GTTTGAAGTG GCTTATTTCA AAGCTTTTTG TATGTCTTCA ATCATGAGTT TTGTTGATTC     6060

AAGTCCGCCT CCGCTTAGAT ACCAGAGGTC TGGTGTTAGT TGGATAATCT TACCATTTTT     6120

AGCAGCAGGT GTTTCAGCGA TAAGGGCATT TTCTAGGACA CCGTCGTTGC TAGAGTTGTC     6180

CCCACCGATG GCAAGGGTAC GGTTGATGAC AAAGAGGATG TCAGGGTTGA TTTCTTTGAC     6240

ACTTTCAAAG CTGACTTCTT GTCCGTGGCG TGAGTCTTCA AATTTTGTAT CAGTTGGTTT     6300

GAATTTCAAG GTTTGGTACA AGAAACACAA ACGAGATTTG GCACCAAAGG CTGCCATTTT     6360

TCCTTCATTA AGGAGGATCG CAAGGGCTTT TTTGTCAGAG CTTTCATTTT TAGTAGCGAC     6420

TTCTTGGATG CTCTTGTCTA GCTTGGTCAA TTCTTCCTTG GCTTTCTGTG TACCAGTTTC     6480

GCCGAAGGCA CTTGCTAAGG ATTCGATATT AGCCTTGGTA GAAGTCCAGT AGTCGTCCTT     6540

GCTTGCTTGG AAGAGAACGG TTGGGGCGAT TTCTTTGAAT TTGTCTACGA ATTTTTGTGT     6600

ACGTGGCGAA GCGATAATCA AATCAGGCTC AAGGGCGGCG ATAGCTTCTA AATCAGGTTC     6660

TTTCATAGAA CCAACATTTT TGACAGTTCC CACTAGGTCT TTTAGATAAG TCGGAACAGT     6720

TTTTGTAGGC ATTCCGACGA TATTTTTTTC AAATCCTAAA GCGCGAATAG TATCCGCAGC     6780

GCCGAGGTCA AAGGTCACAA TCTTTTCAGG AACTTTGGAA AGTTTGACCT CGTCCAGTGA     6840

ACTTTTAATG GTTACCTCTG TTGGAGCAGA GCTACTGGTC TCTGTCTGAC TAGTGCTTGA     6900

GTTTGTACTA CATGCACCAA GTAGGAGCAA GAAGCTGGCC ACTAGGGCAG TGAAATAAAG     6960

TTTAAGGGAT GTTTTCATAA TTTCTCCTTT TTAAAATGTG ATAACGATTT AGGGAGTCTC     7020

TTAATCTTAT TGACTAAGAG ACTGAAGGTT CTCTAACTTG AGCTTTTATG TTACTAGCTA     7080

TAGATACAGA TCTTTTTGTC ATTGATATCA GCTAGCGTGA TGGGAATCTC ATAAAGTTGA     7140
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1062

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CTGAGCAGGT CAGCCTGCAT GATTTGATCG GTTCTTCCCT TGCTAAAGAC CTGGCCGTCC    7200

TTGAAGGCGA CAATTTCATC TGCATACTGA CTGGCCATGT TGATATCGTG GAGGACGATG    7260

ATAATGGTCT TGCCGAGTTC CTCCACCAGT CGTCGAAGAA TCTGCATCAT GCTGACGCTT    7320

TGCTTGATAT CGAGATTGTT GAGTGGTTCG TCCAGCAAGA TAAAGTCCGT ATCCTGGGCC    7380

AGTACCATAG CGATAAAGAC GCGCTGGAGT TGCCCCCCTG ACAGGCTATT GATGTAGCGG    7440

TCTTTTAAGT TGGTCAGTTC TAAATAGTTC AGAGTTTCTC GGATTTTTTC CCAGTCTTCT    7500

GATCTAAGTC GACCTCGGCT GTAGGGAAAA CGTCCAAAAC TGACCAGTTC TTCAACAGTC    7560

AATTTGGCTT GGTAATTGAT TTTCTGTTTT AGGATGGTTA GTTCTTGGGC CAGTTCTTGC    7620

GAATTCCAGC TCTCGATTTC ACGTCCTTTG ATACTGAGAA CTCCCTGATC TTTCTTGGTT    7680

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GTCAGTTTTT GAGGACTGAC TTCAAGCGAA ATGCCTTGCA AAATATCCTG TTTTTGAATG    7800

GATTTGTCAA TGTTTTCCAG TTTCACTGAC GAGACCTCCT ATATAGTAAG ATAAAGAATA    7860

AGAAGCCACC CACACTCTCA ATGATCATAC TGATACGAAT TTCCAGTGCA AAGACTCGTT    7920

CAATCAAGGC TTGCCCCAAG GTTAAGCTAA TAAATCCAAC CAGAATGGCC ACTATAAAGA    7980

GTAACTTGTG CTGATAGTCT TTGACAATCA GGTAGGTGAG GTTGGCCAGT ATAAAGCCGA    8040

AGAAGGCCAT AGGTCCTACC AAGGCAGTGG CCGTTGAGGT CAAAAGCACG ATTCCCCAGA    8100

GGAGCTCTTT CTGTTCTTTT TCAACATCGA GTCCCAATAT CTGAGCCGTT TCTCTTTGCA    8160

GGTGCAAGAC ATCTAGAACG ACTGCTTTTC GAAAGAAAAA GATTGTCAAA GCGAGGATGA    8220

TCAGAGAACC GATGGCTAGG ATGGAAGTGT TGAGATGTTG AAAGGAGGCA AAAAGACTAT    8280

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GAAAGAGACT TCTGAGCGCT AGACAGATCA GCAGGACGAA GACCAGGTCT TGCTTCATCA    8400

GTGTCTTCAA GTAACCTTGT AAGGCGAGAA AGAAGAGGGA CTGGACAAGA AGTAAGACTA    8460

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GGGTTTGTAG TAGGACGTAG AAGGATTCAA TTCCCAAAAT ACTAGGCGTC AGGAAGCGAT    8580

TTTCCGTCAG GGTTTGAAAA CTAATGGTCG AAATCCCAGT CGCGATGGCT ACCAAGAGAT    8640

AAACGATGAT CTTTTGGGAA CGCAACTTCC AAGCAAAGGC TGACAAGTGA GTGATGGGCC    8700

AAAAGTAGAG AAGACAAGCT CCGATGGCAA GAATAATGAG AATCCAGAAG AGCTTGGTAT    8760

GTTTGCTTTT AGTCTGCATC TTTTCGTCCC CCTCTCCAGA GAAGTAGGAT AAAGACGAGA    8820

CTACCGATGA TTCCTAGCAA GAGACTGACA GACAACTCAT AGGGCCTAAT CAGAACTCGG    8880

GATAGGATAT CGCAAGCCAG AACTAGATTG GCACCAACCA GTGCGACCAT GAGTTTGGTT    8940
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1063

TGACTTAGAT TATCTCCATA GCGCTTGCGA ACAAGATTGG GAACGATAAC TCCGAGAAAT   9000

GGTAGGCCAC CCACGGTAAT CATGGTGACG CTTGTCGTTA GCGCCACCAG AAAGAGGGCC   9060

AGTTTTTCAA GTAGGGAGTA GGAAATCCCC AAACTCTCGC TGGTTTCTTT CCCTAGATTC   9120

ATGATGGTGA AGGTTTGGGA TAATTTCCAA ACGGTTATCA GGATGATGAG GCCTAAGAAG   9180

AGCCACTCAT ACTGATGGGT CTGAATCATG GAGAAGGAGC CCTGGGTCCA GGCAGTCATA   9240

CTCTGAACCA GATTGAAACG ATAGGCGATA ACTTCTGTGA CTGAGCCGAT AATCCCGCTA   9300

TAGATGATCC CAATCAGAGG CAACATCCAC CTTTCCTTTA CAGTAAAAAT GGTCATAAAG   9360

GCTAGGAAGA AGAGGGTGAA TACGATGGAT GAAACAAAAG CGAAGAGCAT CTTGTGGGTC   9420

AGACTAGCCG ATGGAAAGAC AAAAAGGCTC AGCACCATTC CCAGTTTGGC GGCTTCAGTC   9480

GTTCCAACTG TACTCGGTGC AGCAAACTGA TTTTGGGTAA TAGTCTGCAT GAGAAGGCCT   9540

GCCATACTCA TACTAGAGGC AGTCAGGAGA ATACTGATAG TTCTTGGGAG ACGGGACTCT   9600

TGAAAGAGGA GCCAGGTCTG CTGGTCGAAA TCAAATAGCT TTCCCCATGA AAAATCACTG   9660

GTCCCAATGC TAATAGAGAG AAAGACTAGG AGTAGAAGTA AGCCAGG   9707

(2) INFORMATION FOR SEQ ID NO: 165:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 5910 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 165:

CCGCAATTAT GCTTGAAAAG GAGTATACTT ATAAGTAACG CAAACGTTTG CGTCTGAAAA   60

ATACGCAACG TTCCATTATT TTAACACACG AGGTGCTATT ATGAAAAAAC GTCAAAGTGG   120

TGTGTTGATG CACATCTCTT CTCTTCCAGG AGCTTACGGA ATCGGATCAT TTGGTCAAAG   180

TGCTTACGAC TTCGTTGATT TCTTGGTCCG TACAAAACAA CGTTACTGGC AAATCCTTCC   240

ATTAGGAGCA ACTAGTTACG GGGATTCTCC TTACCAATCT TTCTCAGCCT TCGCAGGAAA   300

CACTCATTTT ATCGATTTAG ATATCTTGGT GGAGCAAGGT TTGTTGGAAG CAAGTGACCT   360

TGAAGGAGTT GACTTTGGTA GCGATGCGTC TGAAGTTGAC TATGCTAAAA TCTACTATGC ·   420

ACGTCGTCCT CTTTTAGAAA AAGCGGTGAA ACGTTTCTTT GAAGTCGGAG ATGTTAAAGA   480

TTTTGAGAAA TTTGCTCAAG ACAACCAATC ATGGCTTGAG CTCTTTGCTG AGTATATGGC   540

TATCAAAGAG TATTTTGACA ATCTTGCTTG GACTGAATGG CCAGATGCAG ATGCTCGTGC   600

1064

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TCGTAAAGCT TCAGCACTTG AAAGCTATCG TGAGCAATTG GCAGACAAGT TGGTTTACCA        660

CCGTGTGACT CAATACTTCT TCTTCCAACA ATGGTTGAAA TTGAAAGCTT ACGCTAACGA        720

CAACCACATC GAAATCGTTG GGGACATGCC AATCTACGTA GCGGAAGATT CAAGTGATAT        780

GTGGGCAAAT CCACATCTCT TCAAAACAGA TGTCAATGGT AAGGCTACTT GTATCGCAGG        840

ATGCCCACCA GATGAGTTTT CTGTAACTGG TCAGCTTTGG GGTAATCCAA TCTATGACTG        900

GGAAGCAATG GACAAAGACG GCTACAAATG GTGGATTGAA CGCTTGCGTG AAAGCTTCAA        960

AATCTACGAT ATCGTTCGTA TCGACCACTT CCGTGGCTTC GAATCTTACT GGGAAATCCC       1020

TGCTGGTTCC GATACAGCAG CACCTGGTGA GTGGGTGAAA GGTCCAGGTT ACAAGCTTTT       1080

TGCAGCCGTT AAGGAAGAAC TTGGTGAGCT AAACATCATC GCAGAAGACC TTGGCTTCAT       1140

GACAGATGAA GTGATCGAAT TGCGTGAACG TACTGGCTTC CCAGGAATGA AGATTCTTCA       1200

ATTTGCCTTC AACCCAGAAG ACGAAAGCAT TGATAGCCCA CACTTGGCAC CTGCTAACTC       1260

AGTTATGTAC ACAGGAACAC ACGATAACAA TACGGTTCTT GGTTGGTACC GTAATGAGAT       1320

TGATGATGCG ACTCGTGAGT ACATGGCTCG TTACACGAAC CGTAAAGAAT ACGAAACAGT       1380

GGTACACGCT ATGCTTCGTA CAGTATTTTC ATCAGTTAGC TTTATGGCAA TTGCAACTAT       1440

GCAAGATTTA CTAGAATTGG ATGAGGCAGC TCGTATGAAC TTCCCATCTA CCCTTGGTGG       1500

AAACTGGTCT TGGCGTATGA CTGAAGATCA ATTGACACCA GCTGTCGAGG AAGGTTTGCT       1560

TGACTTGACA ACAATTTATC GCCGAATTAA TGAAAATTTG GTAGATTTAA AGAAATAAGA       1620

CAATAATCAG GAGACAACTA AACATGTTAT CACTACAAGA ATTTGTACAA AATCGTTACA       1680

ATAAAACCAT TGCAGAATGT AGCAATGAAG AGCTTTACCT TGCTCTTCTT AACTACAGCA       1740

AGCTTGCAAG CAGCCAAAAA CCAGTCAACA,CTGGTAAGAA AAAAGTTTAC TACATCTCAG       1800

CTGAGTTCTT GATTGGTAAA CTCTTGTCAA ACAACTTGAT TAACCTTGGT CTTTACGACG       1860

ATGTTAAAAA AGAACTTGCA GCTGCAGGTA AAGACTTGAT CGAAGTTGAA GAAGTTGAAT       1920

TGGAACCATC TCTTGGTAAT GGTGGTTTGG GACGTTTGGC TGCCTGCTTT ATCGACTCAA       1980

TTGCTACTCT TGGTTTGAAT GGTGACGGTG TTGGTCTTAA CTACCACTTT GGTCTTTTCC       2040

AACAAGTTCT TAAAAACAAC CAACAAGAAA CAATTCCAAA TGCATGGTTG ACAGAGCAAA       2100

ACTGGTTGGT TCGCTCAAGC CGTAGCTACC AAGTACCATT TGCAGACTTT ACTTTGACAT       2160

CAACTCTTTA CGATATTGAT GTTACTGGTT ATGAAACAGC GACTAAAAAC CGCTTGCGTT       2220

TGTTTGACTT GGATTCAGTT GATTCTTCTA TTATTAAAGA TGGTATCAAC TTTGACAAGA       2280

CAGATATCGC TCGCAACTTA ACTCTCTTCC TTTACCCAGA TGATAGTGAC CGTCAAGGTG       2340

AATTGCTCCG TATCTTCCAA CAATACTTCA TGGTTTCAAA CGGTGCGCAA TTGATCATCG       2400
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1065

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ACGAAGCAAT CGAAAAAGGA AGCAACTTGC ATGACCTTGC TGACTACGCA GTTGTCCAAA      2460

TCAACGATAC TCACCCATCA ATGGTGATTC CTGAATTGAT TCGTCTTTTG ACTGCACGTG      2520

GTATCGATCT TGACGAAGCA ATCTCAATTG TTCGTAGCAT GACTGCCTAC ACTAACCACA      2580

CAATCCTTGC TGAAGCGCTT GAAAAATGGC CTCTTGAATT CTTGCAAGAA GTGGTTCCTC      2640

ACTTGGTACC AATCATCGAA GAATTGGACC GTCGTGTGAA GGCAGAGTAC AAAGATCCAG      2700

CTGTTCAAAT CATCGATGAG AGCGGACGTG TTCACATGGC TCACATGGAT ATCCACTACG      2760

GATACAGTGT TAACGGGGTT GCAGCACTCC ATACTGAAAT CTTGAAAAAT TCTGAGTTGA      2820

AAGCCTTCTA CGACCTTTAC CCAGAAAAGT TCAACAACAA AACAAACGGT ATCACTTTCC      2880

GTCGTTGGCT TATGCATGCT AACCCAAGAT TGTCTCACTA CTTGGATGAG ATTCTTGGAG      2940

ATGGTTGGCA CCATGAAGCA GATGAGCTTG AAAAACTTTT GTCTTATGAA GACAAAGCAG      3000

TTGTCAAAGA AAAATTGGAA AGCATCAAGG CTCACAACAA ACGTAAATTG GCTCGTCACT      3060

TGAAAGAACA CCAAGGTGTG GAAATCAATC CAAATTCTAT CTTTGATATC CAAATCAAAC      3120

GTCTTCACGA GTACAAACGC CAACAAATGA ACGCTTTGTA CGTGATCCAC AAATACCTTG      3180

ACATCAAAGC TGGTAACATC CCTGCTCGTC CAATCACAAT CTTCTTTGGT GGTAAAGCAG      3240

CTCCAGCCTA CACAATCGCT CAAGACATTA TCCATTTAAT CCTTTGCATG TCAGAAGTTA      3300

TTGCTAACGA TCCAGCAGTA GCTCCACACT TGCAAGTAGT TATGGTTGAA AACTACAACG      3360

TTACTGCAGC AAGTTTCCTT ATCCCAGCAT GTGATATCTC AGAACAAATC TCACTTGCTT      3420

CTAAAGAAGC TTCAGGTACT GGTAACATGA AATTCATGTT GAACGGAGCT TTGACACTTG      3480

GTACTATGGA CGGTGCTAAC GTGGAAATCG CTGAGTTGGT TGGAGAAGAA AACATCTACA      3540

TCTTCGGTGA AGATTCAGAA ACTGTTATCG ACCTTTACGC AAAAGCAGCT TACAAATCAA      3600

GCGAATTCTA CGCTCGTGAA GCTATCAAAC CATTGGTTGA CTTCATCGTT AGTGATGCAG      3660

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CTGACTACGA AGACCGTGAC GCATGGTTGG ATAAAGTCAT CGTTAACATT TCTAAAGCAG      3840

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AATACTCTTC GAAAATCTCT TCAACCACG TCAGCTTTAT CTGCAACCTC AAAGCAGTGC      3960

TTTGAGCAAC TGCGGCTAGC TTCCTAGTTT GCTCTTTGAT TTTCATTGAG TATAAGATAC      4020

AAATTTATAC TAATACATTT TGTAAAAAAG CGAGTTTCGA TTGAAATTCG CTTTTTTAAT      4080

GATGTAGATT TGGGTCAATC TTGTCTAAAA ATAGGGAAAT CCTAGATACA GTGAAGGCTT      4140
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                                    1066
TAAATGCTGG TTTTTACTGT CCTCAGCCTT ATATTTTTTC GTAGTTGGTT ACCTCATATC        4200

TATTATATTC GCTTACATAA AGTATTATAA TATAATTGTA GGAAAGAAGG TGTTTTTATG        4260

ATATACACAC TTAAATTGGT GTTGTTTATT ACCTTTCTTG TAATAAGCTT GTTACCTGAT        4320

AAGATTTTTG GAAAAAATAA AAAAATTTGG AAAATAGTTT TTGCAATATT GACGGCAGTG        4380

GCAGCATTGT CATTTATGTA CTAAGTTATT TTAAGAATGT AGGGAAATAA ACCCTACATT        4440

CTTTTTAGTT TTTTCTGTTT TCTAAATTCT ATTTATCCAA GCGATTCAAC ATTTCTTGCT        4500

TCTTCGCTTC AAGTTCTGCA CGCTTTTCTT CGATTTCGGC ATGTTTTTTC TCGAGTTCAG        4560

AACAACTTGC ACCATTGCTA AATTCTTTTC GCCATCAGGA GATAGGGTGA GTCGACATGT        4620

CTATTACTCA CCCAAAGCAG TCCTACAAAG CAGGAATTTT CTGTTACTTT TTTGGAAATA        4680

GTAACGTTTA TACAGCTTTG ACACTTCGTA TCAAAGCGCC AAACACACTC CGAGGGGTTT        4740

ACAGAAAGCA GAAAAGGAAT GATCTGGTAT AAGATCATTC CTTTTCyCTC TTTTTCTTTA        4800

AGTAATTATA TACAATGTAC GACGAAGTCG TCATTGCAAT GCTGATCCAC CACCTAAAGG        4860

GAACTTTAAA CAACATTGAT AAGATAAAGA ATATAAACAA CGAAAATACG TTATACCCAA        4920

TTAATTTTAT TGTATATCTC ATGATTAAAA GTTAATCCTT CCGTTGTTAG GAATGGCATC        4980

ATTTTTATCC CATAATTGTG CTAAATAAGT CCCCGGTGAT AATAAATTCA TAGCGAATTC        5040

TAAAGCAACA TCATTTACAA ACCAACTACC TAGATATCTA GAAATTGCTG AACGAATAGC        5100

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TGTTTCAATT TGTGATACTT GTTCAGAAGC GTATACAGCT GAAACACTTG GAATCGCTGA        5460

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GATTTTATTT GTTATTTTGA CCTGCCTCTA TATTGGTAAC CATGATTTGT TTACTCTCAA        5700

TCATCAAGAA TTCTCTTTTC GTGGTAGCGT TTGGGGTCTG GTACTGGCCT TATATCACTT        5760

ACTATTCATT GATAAGTTTG TTATATCGAA TCGAAAATAA AGATTAGAGC TATGCTTGAC        5820

TGTGTACTTT TAGGATTTAT TTTGGAGGAA GATTTTGTCT CTATTATTTA TTATTTTAAA        5880

TTTATTTATT TTGTATAAGA TCTATTCTTT                                        5910
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1067

(2) INFORMATION FOR SEQ ID NO: 166:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 5406 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 166:

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GGCATAGCGA CTCATTTTTT CAACTGTCCA GGCTGGATAC CAGACTAATT TAACCTCAGT      60

ATCCGTTACT TCTGGAACCT CTATCATAGC ATCATAAATC TGGTCTGTCA AAAGGTCTGC     120

TAAGGGACAA CCCATAGTTG TCAAAGTCAT GTCAATCTCT GTTTGCCCTG TGTCACCGTC     180

AAAACGAATC TCATAGATCA AACCAAGATT GACAATATCG ATTCCCAACT CAGGGTCGAT     240

GACTTCTTCC AAGGCTGTTA AAATCCGTGT TTTGATGTTT TCAATTTGCT CTTCTGTATA     300

AGCCATATTT TCCTCACTCT TAGTCTTCAA TAAAATCACG AAGCGGTTTG CTACGACTTG     360

GTTGGCGTAG TTTTCTCAAA GCCTTTGCTT CAATCTGACG GATACGCTCA CGAGTTACGT     420

TAAAGACTTT CCCCACATCT TCAAGTGTGC GCATTTTTCC ATCATCTAGT CCAAAACGTA     480

GACGCAGAAC ATTTTCTTCA CGGTCTGTAA GAGTATCTAA GATTTCATCC AATTGCTCAC     540

GCAAGACGAT ACGAGTCGTA TAATCCACTG GATTTTCAAT CACTTCATCT TCGATAAAGT     600

CTCCAAGGTG GCTATCGTCC TCTTCACCGA TAGGAGTTTC AAGAGATACT GGTTCTTGGG     660

CAATCTTCAA GATTTCACGA ACCTTATCAG GTGTCATATC CATTCGTTCA GCAATCTGTT     720

CTGGTGTCGG ATCTTGCCCC AATTCTTGAA GGAGATTCCG CTGTTCACGA ACCAATTTAT     780

TGATAGTTTC AACCATGTGA ACTGGGATAC GGATGGTACG AGCTTGGTCC GCAATAGCAC     840

GAGTGATAGC CTGACGAATC CACCAAGTTG CATAAGTTGA AAACTTGAAC CCTTTAGAAT     900

AGTCAAACTT GTCAACCGCC TTCATCAAGC CCATATTTCC TTCTTGAATC AAGTCAAGGA     960

ACTGCATACC ACGACCGACA TAGCGTTTGG CAATGGAAAC AACCAAACGA AGATTGGCTT    1020

CCGCAAGACG TTGTTTGGCT TCGATATCAC CAGCTTCAAC AGCCAGTGCC AACTCTTTCT    1080

CCTCTTCATT GGTCAAGAGA GGAACGACCC CTATTTCTTT CAAGTACATA CGGACAGGGT    1140

CATTGACCTT AGCAGAAGTT GACCCAATCA AGTCCTCATC GCTGAGTTCT GGTTCTTCTT    1200

CATTGCTGAG AACACGCGCA CTTGGATTTC CTTCGTTATC TGTGATAGAA ATGCCTGCAT    1260

CCTGAATCCG TTGCAAGAGA TCTTCAATCC CATCAGCGTC CAAGGTAAAA GGAATAACCA    1320

GACTTGCATT GATTTCATCA TCTGTTGCTG TCCCTTTTTG CTTATGATTA CGGATAAATT    1380
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                                       1068
CTGCTACCTG TACGTCAAAT GTTGTTACTT CTTTTTGTTT TGTTGCCATT ATTACTCCAT        1440

TCTTCTCTTT TGGGAAATTA AACGTTCCAA TTCTTCTAGG GCTGTATCTG TATCTCCTAC        1500

ATGGCTAGCT TCCTGCACCT TCTTTTTGAT TCTCATATTG TCCTGATTCA AGAGAGCCTT        1560

GTTTCGAGTC ATCTCTACTT CACTAAGTTC CTGCGGCGAT ATCTCAGCAG GCAAATCCTG        1620

AGCTAAAACT TGGTACCAAG CTCTTTCAAC TTCCTCTGTC TGCTCTGCTA AAACTTCTGG        1680

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TGGCGTCGGT CTGGAAATTC CTTCCATGCG ATTCTGCCTT TGCACCTGAC GACTCTCATT        1920

AACAATCTGC TCAATCTGGG TATAATCAAA GGACGCCAGA CTGTCAGCTA AAATATGAAT        1980

ATAGCTGTTT TGAGCAGCGA TGGACTTTTC TTGAACAATC AAGGGAGCTA TTTTTTCAAG        2040

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ACCAATTTCA TCCAATGCTT TCAATGTCGC GGCTTGCCCA GCCTTATCTC CATCGTAAAC        2280

AAGAACCAAT TTCTTGGTTA ACCTTTTCAG ATGCTCAACA TGCTCTCGAC TCAAGGCTGT        2340

TCCCATCGAC GCCACAGCAT TTTCGATTCC AGCCCGATAG GCTGCAATAA CATCCATGAA        2400

TCCTTCCATC AGGTAAATCT CACTAGCTTT TCCAGAAGAT CTTTTTGCCC TATCCATATG        2460

ATATAATTCG TAACTTTTGT TAAAAATTGC AGTCGATCGG CTGTTTTTAT ACTTAGAAGT        2520

TTGTGAATCC GTTTTTTGCC AGATACGACC TGAGAAGGCA ATGACCTTTC CTTGGTCATT        2580

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CAACCCCCGC TGATAAAGGT AATTTCTGGC CTCTTCGCCC ATAGTCGTTG TCATGAGAAT        2820

AGCATGGTAA AATTTGGCTG CATCTTCGTG CATATCATAA AGAGCTTGGT GAGGTGAGGC        2880

TGACTTCTGC TCACTATAAA GCGGTTTTTC AACCTCAATT CCAACACGCT GACCTAAGAT        2940

TTGGACTGCT TCTATAAAGG GAACCCCTTG GTACTCCTCG ATGAACTTAA AGACATCACC        3000

TGAGCGACCA CAACCGAAAC AGTGATAAAA CTGCTTGTCC TCTACAACAT TGAAAGATGG        3060

TGTTTTTTCA CCATGAAAAG GACAGAGCCC TAGATAGTTC CGTCCTGCCT TTTGTAAAGA        3120

AATCACATCT CCTATGACTT CCACAATGTT GGCATTGTTT TTGATTTCTT CAATGACTTG        3180
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1069

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TTTGTCAACC ATACACAATA CCTCCATGTT ATCATAGTTT ACTTTATATA GTATACTTTA    3240

TTTCAGAAAA AAAGTAAACC ATTTCACTCA TTTTCCCTAC TTTATTCAAA GAGTTGATAA    3300

TAATCAGAGA TTTTCATTTT TGCTTTTTCT TCTTGGTTTA AATCTTGGAT AATTCGTCCT    3360

TCTTTCATGA CAATCAAGCG ATTGCCGTAT TTGAGAGCAT CTTCCATATG ATGAGTAATC    3420

ATAAGGGCTG TTAGCTGATC TTTCTTAACA AATTCATCTG TCAATTCCAT CAAAGCAACA    3480

CTAGTCTTTG GATCCAGGGC AGCAGTATGC TCATCTAACA GGAGTAATTC AGGTCGCTTC    3540

AAGGTTGCCA TCAAGAGACT CAAAGCCTGT CTTTGTCCAC CTGATAAGAA CTCAATCGGT    3600

GTATTCAAGT GTTTCTCAAG ACCATTTCCT ACTTTTTCAA TGGTTGCCTG AAATTCATCC    3660

TTATAGCTAG TCAAGCGTCG TGGTAACAAT CCACGCTTTT CACCACGAAA CTTGGCGATT    3720

AAAAGATTTT CAGCGACCGT CATACGGGGA GCTGTCCCCA TCTTTGGATC TTGGAAGACA    3780

CGAGACAGGT ACTTGGCACG CTTCTCGGGT GAAAACTTAG TGAGATCTTC ACCTAAAATA    3840

CGGATAGTTC CACTAGTTAG TGATAAGGTC CCTGCTATAG TGTTAAAGAG AGTTGATTTT    3900

CCAGCACCAT TTCCGCCCAA AATCGTGATA AAGTCCCGTT CAAAAATTTC TAAGGAAACA    3960

TCATTTAAAA TAATCTTTTC TTCATCAAAG CCATTTTTAA CGATTTTGGT TGCATTTTTT    4020

AATTCTACAA TTGCTGTCAT TTGCTTAACT TGGCTCCTTT CAAGATTGTT TGCTTAAATG    4080

TTGGAATCAT GAGGCAGACT GCTAAAATCA AGGCACTGTA TAAACGAAGG TAACTTGTAT    4140

TAAAGCCAAG TGCGATAACT GCCCACACTA AAAATTGATA AGCGATAGAA CCTACAACGA    4200

TAGTAACCAA ACGCTCTGCC AAGCTCAAAC TCTTGAAAAT AACTTCTCCA ATAATCAAAC    4260

TTGCAAGCCC CACAACGATA ACCCCGATCC CTCGAGACAC ATCGGCATAA CCTTCTTGCT    4320

GAGCAATGAG GGCACCTGCA AGGGCAATCA CACCATTTGA TAAGACCAAG CCCATGAGCT    4380

CCATGCGTCC AGTATGAATC CCGAAACTTC TAGCCATATC AGGATTATCC CCTGTAGCAA    4440

TATAGGCTTG TCCGAGTTTA GTGTCCAAGA AAAAGAGCAT GAGAGCAATA ACAATACTCA    4500

CAAAGATGAG ACCTGTCAAG AGTTGATTCA AATCCGAATC AAAAGGCAAA ACATCCTGAA    4560

TTTGCTTGGT TCCAAGCAGG CCTAAATTCG CACGTCCCAT AATCAAGAGC ATGATTGAGT    4620

GACAAGAAGT CATCACCAAA ATCCCTGAGA GCAAGGTTGG GATCTTCCCT TTTGTATAAA    4680

GAAGGCCTGC TGCCATTCCA GCCAAACAAC CTGCTCCTAC AGCAACAAGT GTCGCTAAAA    4740

ATGGGTTCAC GCCTTTGGTT ATCAAAGTGA CAGCAACAGC TCCCCCAAGA GGGAAGGAAC    4800

CTTCTGTCGT CATATCTGGA AAGTTTAAAA TCCTAAATGT CATAAAGATT CCCAGACCTA    4860

GAATAGCCCA GACAAATCCT TGAGAAATAA TGGAAACAAT CATATTTTAT TTAATCCTTT    4920
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1070

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CTATATTCAT CTTTTTAAAA AATGGGAAGA GTCTCCTCCT CCCTACCTTA TTTATTCGAT          4980

GACTTGTCCT GCTTCTTTGA GAACAGACTC AGGAATAGTA ATACCTAGTT CTTGTGCTAT          5040

TTTTTTATTG ATGACTGACT TACCAGTTGA AAAGACATTG ACTGGGGTAT CGGCTGGTTT          5100

TGCACCTTTC AAGACTTGCA CAATCATTTT ACCTGTTGCC ACACCAAGGT CATGTTGGTC          5160

AATTACAACT GATGCCAAAC CACCTACTTC TACCATAGCT GTCGCACTGG GATAAATTGG          5220

TTTCTTAGAA CTTTGATTGC TAGAGACAAC CGTTGGAAAT CCTGATGCAA TGGTGTTATC          5280

AATTGGAACC CAAATAGCAT CTACCTTGCT AGTCATAACA GTGACAGTTG AGGCAATTTC          5340

ATTTGTTGAA GGAACTGCAA ATGTTTCCAC TGTCAGACCT GCCTTTTCAG CATAAGCCTT          5400

AAATTC                                                                    5406
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(2) INFORMATION FOR SEQ ID NO: 167:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 9711 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 167:

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CAGCTTGCTC TTACTATTAT AGCAGATGTT ATAGCTGGAA TTATCTTGTA TTTCGTCTGC           60

AAATGGCTAG ATGGTAAGAA GTAGACCGAA TCACTAGCCT ATAAACACCC GTTAAATCGC          120

TAAGATACGT CAAAAAAGCC CTTAACTATG GCACTAGTTA GGGGCTTTGG TGTTCTAATG          180

AACCTTATAC ACTAACTACA TTCTAGCATA TAAGCCCAGA TATTTCAAGA GTTTTATTTA          240

TTGTTTAAAG TTCTGAAAGG TCTATAATGA AGTTAGCCAT CTAGTATCAA AAAACCGACT          300

AGCTCTTATG AACTAGTCGA TTTCTCATCA ATGCGCCAAC ATTTCTTGGG CGATTTCTTG          360

GCCAGATAGG TTATCTGGGT AGTAGGTTGG CCAGTTGTCC ATTTCTTCAA AGAGGGCTTC          420

TTGGCTTGTG CCTCCAAAGA AGATATGGAA ATGTTCTGCC TTAACTGGGG CAACATTGTG          480

GTCACTAAAC TGAACATACT TGAATTGTCC AGCGTCAGCA TCTGTGGCTT CAAAGAGGAA          540

ACGCACGCCA CGATTGCCTT TCTTGTAAGT CAAAATTTTC TTACCGACAT ACTTGTAAGT          600

GTATTTCTTG CTTTGTCCAC CTTGAACAAA TTCCATAGTA TTATCAGTAA TGTTAATCTT          660

AGTCACATCT GTATGATAGC CTTTTGTATA GTAAGCCTTG TACTCAGCCT GGGTCATCTT          720

ACCAGTCAAC TTAGCCTTGT AGTCAAAGAC TTGGTCAAAC GTGCCGTCTT CAAGGAAAGG          780

ATAAACTGAT TGCCAGTTAC CTGCATAGTC ACTCAAGGTG CGGTCCTTGA CAGCTGCATC          840

CTCGAAGTAA CCATTTTGGA CTGTCTTGGT ATCCTCTGCC TTTTCAGGTT CAATTGCTGG          900
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1071

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GCCTTCTTGG TCTGTTGTTT GTTTCAAAGC CTTGAGGTTT TTCTCCATCA CGGAAATGTA      960

GTTTTCTCCA GCCTTGGTGT CCTCTTCTGT CAGACTTTCT AAAGGATTGA GGACATCAGT      1020

TTTGACACCT GCTTCTTTTG AAAGTGTGTT AGCAAGGGCT TGTGAGGCAT TTCTTCAAAA      1080

TAGATATAGG CGATTTTATT TTTCTTGACA TACTCTGTCA ATTCTGCCAA GCGAGCAGCT      1140

GATGGCTCTG CATCTGGAGA AAGTCCTGAG ATTGCGACTT GTTTGAGTCC ATAGTCCAAG      1200

GCAAGATAGT TAAAGGCTGC GTGTTGAGTC ACAAAGCTCT TTTGTTTTGC TTGAGACAAA      1260

CCTTCTGCGT AAGCCTTATC CAAGGCTTGC AATTTTTCGA TATAGGCAGC TGCATTCTTC      1320

TCAAAGGTCT CTTTTTTATC AGGATAATCT GCTGACAAGC TGTCGCGGAT GTGCTCTACT      1380

AGTTTAATGG CACGAACTGG TGATAACCAA ACATGGGGGT CAAACTCATG GTGATGACCT      1440

TCTTCTCCAT GGTCATGGTC TCCCTCTTCT TCCTCGCCAC CTGGCAAGAG CAACATATCG      1500

CCTGTCGCCT TGATGGTTTT CACTTTTTTC TTATCCAAGG TATCTAGCAA TTTAGGTACC      1560

CATGTTTCCA TGTTTTCATT TTCATAAACG AAGGTATCTG CATCTTGGAT TTTGGCAACT      1620

GCCTTGGCAG ATGGTTCGTA TTCATGAGGT TCTGTCCCAG CACCGATTAG GAGTTCTACA      1680

TTAGCCGTAT CTCCTGCGAC TTGCTTGGTA AATTCATAGA CAGGGTAAAA GGTTGTCACG      1740

ATATTGAGTT TACCATCTGC CTGTTTTTGA TTGGAACAAG CCACTAAAAA CAAGGCACAT      1800

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ACTAAACTGA TTAGTATAAA GACAGTTACA AAAATAATGG TAATACTTGC ACTTGCAGGT      1920

GTTTCTGCAT AGTAGGAAAT GTAAAGTCCT GCTACCATTC CCAAAAAGCC AATCGCACTG      1980

GCAAGCAGCA TAACCGATTT AAAGTTTTTC CCCAGACGCA GGGCAATACT AGCTGGCAAG      2040

ACCATAATGG TCGATACCAG AAGAGCTCCT GCTGCAGGAA TCATAAGGGC AATAGCCACC      2100

CCTGTCACCA TGTTAAAAAG AATGGACATG GTACGAACTG GCAAGCCATC CACAAAGGCC      2160

GTATCTTCGT CAAAAGTTAA GATATACATA GGACGAAGAA AGAGAAAGGT CAAAATCAAA      2220

ACAACCGCCG CAATGACAAA GAGGGAAATG ACCTGTTCTT CACTGATAGT CACGATCGAA      2280

CCAAAGAGAT ATTGGTCCAA ACTCATTGAA CTCGAGCTTT TACCCTTGCT CATGACAATC      2340

AGAGAAACAG CCAGACCTGT TGACATGAGG ATAGCTGTCC CGATTTCCAT AAAGCTCTTG      2400

TAAACCGTAC GGAGATACTC CAGAAAGACC GCCGCAATCA AGACAATGGC AATAGTAGAA      2460

ACAGTTGGAG AAATCCCCAA AACCAGACCA AAGGCTACAC CTGAAAGTGA GACGTGGCTA      2520

AGGGTATCAC TCATCAAACT CTGACGACGC AAGATGAGGA AGGTTCCCAA TACCGGTGAG      2580

AAAAGACTCA TAGCAATAAC CGCCAAAAAG GCGCGTTGTA TAAAGTCGTA AGATAATAAA      2640
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1072

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CTAAGCATGG CCCACCTCCT GGCCATTCTC ATGAACATTG AAACAACGCC ATGGCGAGTC     2700

TTGGTTACGG ACTAGATGAA TATTGCGATC CGCATAATCC TTAACTTCTT CAGGGTCATG     2760

GGTAATCATC AAAACAGCCT TGCCATGATG ATGGGCGCTG TGGTGCATGA GTTCGTAAAA     2820

TTCATTTTTA CTTCCTGCAT CCATCCCCGT TGTCGGCTCG TCTAGGATAA ACACATCAGG     2880

GTCAGAAGCA AACATACGCG CAATTACCGC TCGCTGCTTT TGTCCCCCAG ATAGAGACCC     2940

CAAGCGTTTG TCTCGATGTT CCCACATGCC AACTGAGTCC AGACTAGCCT TGATATGCTC     3000

CTCATCATGA GCATTCAAAC GACGGAACCA GCCTTTCTC GGATAGCGAC CCGACTTGAC     3060

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TGGTTGCAGA ATTCCAAGAC TAGCCTTGAT GAGCGTCGTC TTAGCCGCTC CATTTTCCCC     3240

AGTCAAGGTA ACAAATTCCC CACTATCAAC ACAATAATTG ATATGTTCAA GAACAGGCTC     3300

CTTATCATAA TAGAAGGACA AATCCTCTAC CGTAATATAT CTCATTATTT GATTTCTCCT     3360

ACTAAAGCAG TCAAAAACCG CTGAATCACT TTTTGTTCAT TTGGAGTAAA CTGAGTCGCC     3420

ACTTGTTCAT AGGTTAAAAG TGTATGCTCA TGGTGATGGT GGTGCTCCTC AGCGATTGGA     3480

CGAGCCAAGT CAGTCAACTG ATAAAAAATC ACACGCGCAT CTTTAGAATC TTTAGATGTT     3540

TCCAACATCC CTTCCTTGAC CAAAGACTTA ATGGCCTTGG TAACTGCCGC CTGACTGACA     3600

TTGAGACGAC GGGCCAATTC TGAATTTGTT AAAGATTCCT CTGACAAGAG CATAAGGATA     3660

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TGATTTTCCG CCTGCAAAAT CACCTCATTC AAAAAAGCAT TGATATCCTT TGCTAGCTGT     3780

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GACATTTTGT TTACCAGTTA ATTATATCAC AAGCAAAAAA AGAGTCAAGA AAAAACGTGA     3900

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TGGTGTGGGA TTGGATAGGA AAGGATCAAC TGCCTTGTCA AAAGCCAACC AACCCAACCA     4080

ACCAAGGTGA ATGGTGTCCT TCATAAAGAA AGGCTCCCCG CCGTCCTTAG AAAAATCTGC     4140

TATATTGGTA AAACCTTGAC TTTCTAACTG GTAGCGAATC TTCTGCACCG TTTGTTGGTA     4200

CATATCCTCT CGTAGACCAG CATAGTTCAT CCATTTTTTA TTAACAGGTG GAATGATAAA     4260

AATCGGGTTT ACCTTAGATT TAGAAAACTG TGTTAAAACC AACTGCAAGT CATTATACTC     4320

TGGCGACTTG AGATAGGTAA AGCTTTTCTG AGAATCCTTT AATTTCTTCA AATCCTTCTT     4380

GATCTGCTCA TTATAGAAAT AATTTTCCAT TCCCATCTCA TTATTGGAAG TATTTTTTTC     4440
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1073

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AGCATCTGCT TTGACAACAT CTTCTATTGC CTGATAAGAA AACTGGTCTG GCAAGATTTT   4500

TAAATACTTA GCTACATGCT TATCGTAGTT AACATAGCCT CTAACCGAAA ACTGACCAAA   4560

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CGACAATTCT TCTTTACTTG CCAACTTCTG AACCAGGTCC TTCATAGCTA CGTTTGGGAA   4680

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CCTAAAACAT GAGCTAGGAT AAACTTATAC AAAAAGCCCC ACATGATATA GCGGACAGAT   6120

TCATCCAGCA TATCCATCAA CTCATCTCGC TCAGGAATAG CCTGATAATT TTCATTAAAT   6180
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1074

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CGCTTAAAGC GATCGATTGG ACCACTCGAG AAAGTTGGCA TGAAGAGAAG GAAACGGAGG    6240

AATTCCCAGA GGGTAAAATC CTTAATCACT CCATCTCTCA GCTCGATGAC AATTCCAACC    6300

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ACCCACTTGC CATCCTTGCT TTTTCGATAA TGCTTGTAGA AAAGCAGGAG CAATATTTCC    6480

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CGCCTGTGTG ATAGGCTGGC AGATCTTCAA ACTCAAAGAA GGCTTCTGCT GTTTTTTCAG    7140

GATTGTTCAT ATAACCTTTT GAAACAGCTG GCCCAGAAAC AATGATTTCT CCCTGCTCAC    7200

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AGCCGATTGG TAGGCGTTTG AGAGTCGCTA ACATCTCGTC TGTCACGGCA ACTGCTGACA    7320

GAGCTACTGT CGCTTCTGTT GGGCCGTAAG CATTGATGAT ACGGGCATTT GGGAAACGCT    7380

CGCGCAGTTT TTGAGCTGTT TTGACCGTCA ATTCTTCACC ATCAAAGTAG AAATGCGTGA    7440

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GTGTTGATGT CCAGATAGCG ATTGGCAATG AAAAGATAGC CGCAAAGAGT TGCTTAAACT    7560

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CATCTCCCTT GACTGGATGC GTGATTTCAT AGTTATTCCC TTGGGCAAAG GCTTCTTGAA    7860

CCTGAGCTAG ATTTATCATT GGTGTAGAAA CCTGCTCCAA GGGAAAGGCT GAAATGGCAA    7920

TAATCAAGCT TGGCTCTGCT ACTTCTAAAA TAGCTGAAAC TCGCTCCAAG GCCGAATGGC    7980
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1075

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TATCAATTGG AATGTAGGCA TGACCTGACT TAGTCAGCGC TACAAAGGTT GCCAACATTT      8040

CATATTCTTG GCCACCAAAA ACAACCACAG GAGACTTCTC AGGCAAGCCT AGTTGGTCAA      8100

TGACTGCAGC CAAACTATCC GAATCAGCCT TTAAATCGCC ATAAGTGTGT TCCTGCCCCA      8160

AAACATTATA GACAGGATAG CTAGGCTGTG TCTGAGCAAA ATGCTCAATG GTTTCAATCA      8220

TATCTGCTAT TGGTTTATTT GACACAATAG GGATTCTCCT TCAAGTTAAA ATTCATTATA      8280

GATAAAGCTT CCTTGACCCT GACCAAGATA GCTAAAGAAG TAAAGCAGCC CTAGAAAGAT      8340

AAGAAAATAC AAGGCTGTCC GACCAAGAAA GAGGTACAAT TCTTTTCTCT GTTTCATCAA      8400

GAAAAACCAT TCATTTCTGT AATTTTTCGC TAAAATAAGA GTGATTCTTA CTAGCTTATT      8460

TTTCTACCAT TGTACCACTT TATATAGTAT CTTTTCAATT GTTTACCGTA TGTTTCCAAT      8520

AGATTTCAGC TTATTTTAAG GATTATACAG TTTTTCTATG TATATTTTCA AATAGAGTGA      8580

TCCTGCTTCA AAACTCCATT TCAGGAGACA ATGAAGTAAA TCTTCCCATA ATAAAACACA      8640

CAATATCAAG TTTTTTCAAC ACCTGATACT ATGCGCTTTT CTGATTTTTA AAGACTTTTT      8700

AACCACTCTC TCATTTAAAA TAATCTCGTC TGATATAAAT TAAAATAGCT TCTATCATCA      8760

GACAAATGGC TGATAGCCAA AAACTGATGC TAATACCAAA ACTCTCAGTA ATATAGCTCA      8820

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TAACTAAATG ATTTTCCTCT ACTGTTTCCT GAAGAAATAC ACTTTCAGGA ACTTCTTTTA      8940

CTTGCGATAA CATACCAACT AAAGCTGAAA ATAATAAAAA CATCTGTGCG TTTGGAAAAT      9000

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TTGATTAAGG TTGAACTATC CGTTTTATCG CCAAAAAATC CCTCCTTCAT CTCCTTGATG      9600

AAATTCTCGG CTTGACCACG TCCACGATAA AGCTGAAACT GGTCTTGGcT gTTCCACTCG      9660

TCATATTTGT AACGAGAGAA ATAACATCGT AGAACAAGTA TCCTTCTTTT C               9711
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1076

(2) INFORMATION FOR SEQ ID NO: 168:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3025 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 168:

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CCCCTTTGTC AAAACTGTAA AATTAACGAC TCAACAATTC ATCTTTACAC CAATCTCAAT      60

GGAAAACAAA AACAAATTGA CCTCTGTCAA AACTGCTATA AGATTATCAA AACAGATCCT     120

AACAATAGCC TCTTCAAAGG TATGACGGAT CTGAACAATC GTGACTTCGA TCCCTTTGGT     180

GATTTCTTCA ATGATCTAAA CAATTTCAGA CCTTCTAGCA ATACTCCTCC TATTCCCCCA     240

ACCCAATCAG GTGGAGGTTA CGGTGGAAAC GGCGGTTATG GTTCCCAAAA TCGTGGATCT     300

GCTCAAACTC CGCCACCTAG CCAAGAAAAA GGCCTGCTGG AAGAATTTGG TATTAATGTA     360

ACTGAAATTG CCCGTCGTGG AGACATTGAC CCCGTTATTG GGCGCGACGA TGAGATTATC     420

CGTGTCATCG AGATTCTCAA TCGTAGAACC AAGAATAATC CTGTCCTTAT CGGTGAACCT     480

GGTGTCGGAA AAACGGCCGT TGTCGAAGGT CTAGCTCAGA AAATTGTCGA TGGCGATGTG     540

CCACATAAAC TCCAAGGTAA ACAAGTCATC CGTCTGGATG TGGTTAGCTT AGTTCAAGGA     600

ACGGGGATTC GAGGACAATT TGAAGAACGC ATCCAAAAAC TCATGGAAGA AATTCGCAAA     660

CGTGAAGACA TCATCCTCTT TATCGATGAA ATCCATGAAA TTGTTGGTGC TGGTTCTGCG     720

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CAACTAGTCG GTGCTACTAC CCTCAATGAA TACCGTATCA TTGAAAAGGA TGCTGCCCTC     840

GAGCGTCGTA TGCAGCCTGT TAAAGTCGAT GAACCAACGG TGGACGAAAC AATCACTATT     900

CTCAAAGGGA TTCAAAAGAA ATACGAAGAT TACCACCACG TTCAATATAC AGATGCTGCG     960

ATTGAAGCAG CTGCAACTCT TTCCAATCGC TACATCCAAG ATCGCTTCTT GCCTGACAAG    1020

GCCATTGACC TCCTAGATGA AGCTGGTTCT AAGATGAACT TGACCTTGAA TTTTGTGGAT    1080

CCTAAAGTAA TTGATCAGCG CTTGATTGAG GCTGAAAATC TCAAGTCTCA AGCTACACGA    1140

GAAGAAGATT TTGAGAAGGC GGCCTACTTC CGCGACCAGA TTGCCAAGTA TAAGGAAATG    1200

CAAAAGAAAA AGATCACAGA CCAGGATACT CCTAGCATCA GCGAGAAAAC TATTGAGCAC    1260

ATTATCGAGC AGAAAACCAA TATCCCTGTT GGTGATTTGA AAGAGAAAGA ACAATCTCAA    1320

CTCATCCATC TAGCCGAAGA TCTCAAGTCT CATGTTATTG GTCAAGATGA TGCAGTCGAT    1380

AAGATTGCCA AGGCTATTCG CCGTAATCGT GTCGGACTTG GTACCCCTAA CCGCCCAATC    1440
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1077

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GGAAGCTTCC TCTTCGTTGG GCCAACTGGT GTCGGTAAGA CAGAACTTTC CAAACAACTG      1500

GCTATCGAAC TTTTTGGTTC TGCTGATAGT ATGATTCGCT TTGATATGAG TGAATACATG      1560

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GCTGGTCAAT TAACTGAAAA AGTTCGCCAC AATCCATATT CTCTCATCCT TCTCGATGAA      1680

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TTGACAGACG GGCAAGGACG CACCGTTAGC TTCAAGGATG CCATCATTAT CATGACCTCA      1800

AATGCAGGTA CAGGAAAGAC CGAAGCTAGC GTTGGATTTG GTGCTGCTAG AGAAGGACGT      1860

ACCAATTCTG TCCTCGGTGA ACTCGGTAAC TTCTTTAGCC CAGAGTTTAT GAACCGTTTT      1920

GATGGCATTA TCGAATTTAA GGCTCTCAGC AAGGATAACC TCCTTCAGAT TGTCGAGCTC      1980

ATGCTAGCAG ATGTTAACAA GCGCCTCTCT AGCAACAACA TTCGTTTGGA TGTAACTGAT      2040

AAGGTCAAGG AAAAGTTGGT TGACCTAGGT TATGATCCAA AAATGGGAGC ACGCCCAcTT      2100

CGTCGGACTA TTCAAGACTA TATTGAGGAC ACAATCACTG.ACTACTACCT TGAAAATCCA      2160

AGCGAAAAAG ATCTCAAAGC AGTTATGACT AGCAAGGGAA ACATTCAGAT TAAATCTGCC      2220

AAAAAAGCTG AAGTTAAAAG TTCTGAAAAA GAAAAATAAA TCCTATAAAA AAGGAGTAGA      2280

AAATGAAATT TTTCTGCTTC TTTTTTTACT AAAATAACTG TAATTTCTTG ACAGCTTGCC      2340

CTTTGTCCAT TATGATATAT AGTAGACTGA ATCTGAAATA GTACGAAACA ATTGCTAAAA      2400

CATTTATAGA AATTAATTTT ACTTTCCCAA TCGATTTGTT CTCATCTTAT TTCAATCTGC      2460

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AATACCTTTT TGAGGTGCTT TTTGATATGA GCCCATGTTT TCTCAATAGG ATTGTACTCA      2580

GGTGAGTAGG GAGGAAGAGG TAAAAGTTTA TACCCAAACT CTTCACACAA GAGTTCTAAC      2640

TTACCCATTC TATGGAATCT TGCATTATCC ATAATAATAA CCGATGGTGT GGTTAATGTT      2700

GGTAAGAGAA ACTTCTGAAA CCAAGCTTCA AAAAAGTCGC TCGTCATCGT CTCTTCGTAA      2760

GTCATTGGAG CGATTAACTC ACCATTCATT TGTTAGACCT GCAACCAAAG AAATTCTCTG      2820

ATATCTTCTT CCAGATACTT TGCCTCTTCT TAACTGACCT TTTAATGAGC GACCATATTC      2880

TCGATAAAAA TAAGTATCGA ATCCTGTTTC GTCAATCTAA ACAGGTGCTA GGTGCTTTAA      2940

ACTATTAAAA TTCTTAAGAA ATAAGGCTAC TTTTTCTGGG TCTTGTTCAT AGTAGGTGTA      3000

GTTCTTTTTT TTTTCGAGTG TAGCC                                            3025
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(2) INFORMATION FOR SEQ ID NO: 169:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 4104 base pairs

1078
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 169:

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TTTAAGGTTT TAAAAAAAGT TTTCGAAAGG TTTCTTCTTT ATTTTTTAAG GGAGAGATAA      60

CGTTGATATC TAAATCGTGG TCAAAGCCGG CAATTTTTCC TTTAGATGTG TATTGGTGAA     120

TATCATAATC TAAATCAGTT TTAGGACTGC TCTCCAAAAA TCCTGAGTCT GAGCCGTAGA     180

CGGAATCCAA ACAGAGGTAA ACTTGCCTGT ATCAATACTG TGTTCTTCCA TGAAGTAGAC     240

ACCAACGTAG ATGCCGATGT TTTTAGCACC CAGTGATGCT AGTTTTGCTC GAAAGTTTTC     300

GACACCTTCG TTCATATTAG ACATGGTTTT GTCTTCCACG TCAAGCCAAT AGTAACTAGG     360

GCTGTAAGGA GAGGCAGCAT TGTAGAAAAC TTCGGCAGCC TTTTCCATTT CTTGGACACT     420

TTTTCCAGCT ACATAAGCGT AGACAGCAAC TGGGACATTC CGCTTTTGAA GTTCAGTGAT     480

ATGACTCTTA TAGGCCTTGT CTATTCCATT GATAAATGAA GCATCATTTT CTTTTGTCGT     540

TTGAGCACCA CTGTGAACAC GAACAATAGC ACCTGAAATA TTTTGTGAGA GGGCATCGTA     600

GTTGATTTCC TCAGGACGCT GCCAGCCAGA GAGGTCAATA ATCGGTTTGT CTAAGTGTTT     660

CAAAGCCTGT GCTTCAATCT GTGCTATATT GGATTTTGTT TTAAACGATT GGCTGTCATT     720

AAGTGGGCGA TTGATGATTA AAATGAACAT CATAATCCCA AAAAAACTAA ATAAAATAAG     780

TGGATGAATT TGTTTTCTCA TATCTTATAA TTCTACCCTA AAAATCAAAA AAAATCAAAA     840

AAATGGGTTA AGGAAGAGAC TTTAGAGCAT TTTTTCATTC AAGAGTGCGG AATGATTTGA     900

AATATGGTAT AATAAAAGGG AATTTCTACA GAAAAGAGAA GATTATGTCA AATTTTGCCA     960

TTATTTTAGC AGCGGGTAAA GGGACTCGCA TGAAATCTGA TTTGCCAAAA GTTTTGCACA    1020

AGGTTGCGGG TATTTCTATG TTGGAACATG TTTTCCGTAG TGTGGGAGCT ATCCAACCTG    1080

AAAAGACAGT AACAGTTGTA GGACACAAGG CAGAATTGGT TGAGGAGGTC TTGGCTGGAC    1140

AGACAGAATT TGTGACTCAA TCTGAACAGT TGGGAACTGG TCATGCAGTT ATGATGACAG    1200

AGCCTATCTT AGAAGGTTTG TCAGGACACA CCTTGGTCAT TGCAGGAGAT ACTCCTTTAA    1260

TCACTGGTGA AAGCTTGAAA AACTTGATTG ATTTCCATAT CAATCATAAA AATGTGGCCA    1320

CTATCTTGAC TGCTGAAACG GATAATCCTT TTGGTTATGG ACGAATTGTT CGTAATGACA    1380

ATGCTGAGGT TCTTCGTATT GTTGAGCAGA AGGATGCTAC AGATTTGAA AAGCAAATCA    1440

AGGAAATCAA CACTGGAACA TACGTCTTTG ACAACGAGCG TTTGTTTGAG GCTTTGAAAA    1500

ATATCAATAC CAATAACGCT CAAGGCGAAT ACTATATTAC AGACGTCATT GGTATTTTCC    1560
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1079

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GTGAAACTGG TGAAAAAGTT GGCGCTTATA CTTTGAAAGA TTTTGATGAA AGTCTTGGGG    1620

TAAATGACCG TGTGGCGCTT GCGACAGCTG AGTCAGTTAT GCGTCGTCGC ATCAATCATA    1680

AACACATGGT CAACGGTGTT AGCTTTGTCA ATCCAGAAGC AACTTATATC GATATTGATG    1740

TTGAGATTGC TTCGGAAGTT CAAATCGAAG CCAATGTTAC CTTGAAAGGG CAAACGAAAA    1800

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GAGCGGTCAT TACCAATTCT ATGATTGAGG AAAGTAGTGT TGCAGACGGT GTGATAGTCG    1920

GTCCTTATGC TCACATTCGT CCAAATTCAA GTCTGGGTGC CCAAGTTCAT ATTGGTAACT    1980

TTGTTGAGGT GAAAGGATCT TCAATCGGTG AGAATACCAA GGCTGGTCAT TTGACTTATA    2040

TCGGAAACTG TGAAGTGGGA AGCAACGTTA ATTTCGGTGC TGGAACTATT ACAGTCAACT    2100

ATGACGGCAA AAACAAATAC AAGACAGTCA TTGGAAACAA TGTCTTTGTT GGTTCAAATT    2160

CAACCATTAT TGCACCAGTA GAACTTGGTG ACAATTCCCT CGTTGGTGCT GGTTCAACTA    2220

TTACTAAAGA CGTGCCAGCA GATGCTATTG CTATTGGTCG CGGTCGTCAG ATCAATAAAG    2280

ACGAATATGC AACACGTCTT CCTCATCATC CTAAGAACCA GTAGGAGCCT ATCATGGAGT    2340

TTGAAGAAAA AACGCTTAGC CGAAAAGAAA TCTATCAAGG ACCAATATTT AAACTGGTCC    2400

AAGATCAGGT TGAATTACCA GAAGGCAAGG GAACTGCCCA ACGGGATTTG ATTTTCCACA    2460

ATGGGGCTGT CTGTGTTTTA GCAGTAACGG ATGAACAAAA ACTTATCTTG GTCAAGCAGT    2520

ACCGCAAAGC TATCGAGGCT GTCTCTTACG AAATTCCAGC CGGAAAATTG GAAGTAGGAG    2580

AAAACACAGC CCCTGTGGCA GCTGCCCTTC GTGAATTAGA GGAAGAAACA GCCTATACAG    2640

GGAAATTAGA ACTCTTGTAC GATTTTTATT CAGCTATTGG CTTTTGTAAT GAGAAGTTAA    2700

AACTATATTT AGCAAGCGAT TTGACAAAAG TGGAAAATCC GCGTCCGCAG GATGAGGATG    2760

AAACCTTGGA AGTCCTTGAA GTGAGCTTAG AAGAAGCGAA AGAATTAATC CAATCAGGTC    2820

ATATCTGTGA TGCCAAGACA ATTATGGCTG TTCAGTATTG GGAGTTGCAG AAAAAATAGA    2880

GGAGGTCAGT ATGGGTAAAT CTTTATTAAC GGATGAAATG ATTGAAAGAG CTAATAGAGG    2940

CGAAAAAATT TCAGGTCCTC CTTTGCTAGA TGATAATGAG GAAACTAAGA TTTTACCAAC    3000

CTCTTCTTCC CGTTTTGGTT ATGCCAATCC TAAGGATCAT GGTTTTAGCC AGGAAACCTT    3060

GAAGATTCAG GTCGAACCAT CTATTCATAA AAGCCGTCGT ATTGAAAATA CCAAGAGAAA    3120

TGTCTTCAAT TCTAAGTTGA ATAAAATCTT ATTTGCGGTC ATCTTTCTCT TGATTTTGCT    3180

TGTTTTAGCA ATGAAACTTT TGTAATAGAA AAGGAATTGA AATGAAAATA GGAATTATTG    3240

CTGCTATGCC AGAAGAACTG GCTTATCTGG TCCAGCATTT AGATAATGCC CAGGAGCAAG    3300
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1080
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TTGTTTTTGG GAATACCTAT CATACAGGAA CCATTGCTTC TCATGAAGTC GTTCTTGTAG      3360

AAAGTGGAAT TGGTAAGGTC ATGTCTGCTA TGAGTGTGGC GATTTTGGCT GATCATTTCC      3420

AGGTGGATGC CCTTATTAAT ACGGGTTCAG CTGGGGCAGT AGCAGAAGGT ATCGCTGTTG      3480

GGGATGTCGT GATTGCTGAC AAATTAGCCT ATCATGACGT GGATGTCACA GCTTTTGGCT      3540

ATGCTTATGG ACAAATGGCG CAACAACCGC TTTATTTCGA ATCAGACAAA ACCTTTGTTG      3600

CTCAAATCCA AAAGAGTTTA TCTCAATTGG ACCAAAACTG GCATCTTGGT TTGATTGCTA      3660

CAGGAGATAG TTTTGTTGCA GGAAATGACA AGATAGAAGC GATTAAGTCC CATTTCCCAG      3720

AAGTTTTAGC CGTGGAGATG GAGGGGGCAG CTATTGCTCA AGCAGCGCAT GCCCTCAATC      3780

TCCCAGTCTT AGTCATCCGA GCTATGAGTG ACAATGCCAA CCATGAAGCA AACATCTTTT      3840

TTGATGAGTT TATTATCGAA GCTGGACGTC GCTCTGCCCA AGTCTTGTTG ACCTTTTTGA      3900

AGGCTTTAGA TTAAGCGGAA ATTTGACAGT TTTTCTAGCT TATGATAAGA TTTAAGTAAA      3960

GAAAAGCTAG AAAACGTTTC AGAGGATATT ATGAGTATTG AAATGACCGT CAGTGAGATT      4020

GCAGAGGTCT TAGGATTATC TCGCCAAGCA ATCAATAACC GTGTCAAAGA ATTACCAGAA      4080

GAAGACACAG ATAAAAATGA CAAG                                            4104
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(2) INFORMATION FOR SEQ ID NO: 170:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 8876 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 170:

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CACGGATAGG CTCGGCTTTC ATCAGTCCTC AGGCTGATTT ACTAATAGCA ACTTTCCTCG       60

ACAAAGTCCA CAGCGATACG TnTGGGTATC AATCCTACGC TTACGCTGAT ACCTTTGCTG      120

GCAGGATTGG CAACGATAGA GCTTGATTGG CTTGGAGTTA CTATTGGGCA AGGATGGTAC      180

AAACCGTAAT CCATCCACTG CTTTCAACAG TTCCTTAAAA TCCCGATCCT TGTGTTGATA      240

GCCTTTCCCT TGAAAATAGA GGTGATAATG ACAGAGTTCA TGTCGGACAA TTTTCCTAAA      300

AACGTCCAAC CCCAGTTCCT GATAAACCTT GGGATTAAAA TCCAAATGCC CATCTTTGGG      360

GAAAAATCGC CCACCTGTCG AACGTAGACG CCTATTCCAC TGGACATGAT GGATAAAAGG      420

TCTGCCGAAG TCTTCTAGTG AAACCTGCTT GACGTAATCA GTCAGTTTCA TTTGGAGCTA      480

GGAGAGACAG ATTAACTTTT TCACGTTCAG TATCAATTTT CTTAACCCAA ACGCTCACCA      540

AATCTCCAAC TGCCACCACT TGACTAGGGT GTTTGATAAA CTTGCGACTC ATATGGGAAA      600
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1081

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TATGGATGAG ACCGTCCTCA TGAATTCCGA TATCAACAAA AGCACCGAAA TCAACAACGT       660

TACGCACCAC TCCTTCTAGC TTTTGTCCAA CCACTAAGTC CTTGATATCT AGGACATCTT       720

GGCGAaCACA GGTGCGTCAA AGGAATCACG GAAATCTCGA CCTGGTTTGA GAAGATCTGC       780

AATGATATCT TTAAGAGTTT CTGGACCAAG GTCTAACTCT TGCGCCATTT CCTTGACTGA       840

AAGCGACTTG AGTTTGCTTT GGGCTTCTTC GTTTAGGTCT TTAATATCTA AACGTTTGAA       900

GAGTTCCTTA ACTGCAGTGT AATTCTCTGG GTGAACTCCT GTATTATCAA GGATATTGCT       960

ACTTTCAGGG ATACGAAGGA AACCAGCAGC CTGCTCAAAG GCCTTGGCTC CCAGACGAGG      1020

AACTTTCTTG ATTTGGGCGC GTGAAGTGAT TTTTCCTTCT TCCTCGCGGT ATTTGACAAT      1080

ATTTTCAGAG ATAGTTTTGT TGAGTCCAGC TACGTGTGAA AGAAGAGCTG GGCTAGCTGT      1140

ATTGACATTG ACACCAACTT GGTTAACCAC TGTATCGACA ACAAAGTCCA GACTCTCAGA      1200

TAGTTTCTTC TGACTGACAT CGTGTTGGTA TTGACCGACA CCAATTGACT TAGGATCGAT      1260

TTTGACCAAT TCCGCAAGAG GATCTTGCAA ACGACGGGCG ATAGAAATGG CAGAGCGTTT      1320

TTCAACGGTC AAGTCTGGAA ACTCCTGACG AGCAAGTTCG CTGGCAGAAT AGACAGAAGC      1380

ACCACTTTCA TTAACGATAA CATAGCTGAC TTCAGGGAAA TCTTTCAGAA CTTCCGCTAC      1440

AAAAGCTTCA CTTTCACGAC TGGCCGTTCC ATTTCCAATG GCAATAATCT CTACACCGTA      1500

TTGACCAATT AAATCTGCTA AATCTTTCTT GGCTTCTTCG ATTTGACGAG CTGATGCTGG      1560

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AACCAAGAGG AGATTGCGCA GATTGTCAGA AAAAAGTTGG ATAGCTCCTT CTTCAGCTTT      1740

CTCAGTTAAT TCTGTCCGAA TACGACGCTC GATAGCAGGC AAGACCTTTT TCTTAACGGA      1800

TTGCTGAACA ACTTCATCAA TATAAGCATT TTTCACCTTG AAACGAGTAG CAAAGAAGGC      1860

AAGAATACGG TCCGTCGCAT GTTCAAAACC GATCTTCAAG ACACCAAGTT TCTCCCCACG      1920

ATTGAGAGCC AAGGTACGAT AGCCTTGCAT AGTTCCAACT GTCTCTGAAA AATCATAATA      1980

AATCTGAAAA ACCTGCTTTT CATCAAGACT TTCATCCTTG GCTTGAGAAG TAAGTTTAGA      2040

GTGTCTCAGC ACTTCCTGAT AAGTCATAGA ACGCAAGGTC ACATCTTCCG ATAAGGCTTC      2100

GACCAAAATA TCAACTGCAC CGGTCAAGGC TTCCTTGCCA GTCGCAAATC CTTCACAGAC      2160

GAACTTTTCA GCTTCTTTCT CTAAGTCAAC TATATTCTGC AAAATCAAGC GAGCAAGAGG      2220

AAAGAGTCCA GCTTCACGGG CAATGGTTGC CTTGGTACGA CGCTTTTCCT TATAAGGAAG      2280

ATAGAGTTCT TCAACGTCTG CTAATTTTTC GGCAACTAAG ATAGCTTCTT CCAATTCCTT      2340
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1082

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GGTCAACTTA CCTTGTTCTT GAATCTTAGC TAAGACAGCT TCCTTACGGT CATTGAGATT    2400

TGTCAGACTT TTATCCAAAT CAATAATAGC CTTAATCGCC ACCTCATCCA GACTACCAGT    2460

CATGTCCTTG CGATAACGCG CGATAAAGGG AATAGTCGCC CCTTCAGCTG TCAAACTTAG    2520

AACGGTATCA ATTTGCTTTA ACGTCACTCC CAAATCCTGA GAGATTTTTT CATATTTTTT    2580

ATCCATAAAT CTATTATACC ACAAGCTAAA CGTTTCAAAT TAACTCGTAG AACATTTAAA    2640

AAATATGTAG GAAATAGATT TATATGCTAC AGCGCAATAA CTTGCACTTA AAGAGCATTG    2700

CCACCTTTTT TTAACCAAGC CATGATATCA AAAGTATTTA ATGGATCAGA CATAATAGCC    2760

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CGATTGACTA AAATTAATTT ATTAGAATAA GGAAGATTAT CCATCTTATT TAAAATTTCT    2880

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TCTATATCTC CTAAGTGCCC CAAAGGATAA ACTTCATGAG TCCAGCTCGG TGAAATAAGT    3060

TCCTCTTCGA AAACAAGTTC TTGTTCCATA TAATAACGAA AATGCTTTGT AAGTTTATAA    3120

TAATCATCAG GAAGAATAAA TAAACCAACA AAAGGTGTTC TATATTGAAA ACCAAGCTGT    3180

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TCAAGAAAAG GGAAAATTCC TTTCTCTGCA GCTATTAACT TATGATAAAC AATATCAGAA    3300

TCTAAATATT CACCGTCATT TTTTAACCAA GCACTAAAAT TTCCCAATTC TTGAATATAT    3360

TGTTTTTTCG CTCTTTCTAT ATCATAGTTT TCTAAGACGG CGCAATCTTT GATTCTATTT    3420

TCATAATTTT CTAATATGAT TTTGTAGGAG TCTTTTAGAG GTTTAGCATC TATAACAGGT    3480

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TAAAATACTC CATCAACCAA ATCAGCAAAA TGACCAAGAA CAACATCAGA ATCGGATAAT    3780

TTTATCGCAT GATACATCTT TTCAAATGTC CAATCAAATA ATGAATCATT TGAAGATAGA    3840

AACGTAATAT AATCTCCTGT AATCATATCA GACAACTCAG CAAAAGAATT CTCATCTATA    3900

ATCTTAATAT TAAATGATAG ATTCATCTGT TGGCTAATGG AAGCTATCTC CTCTGTAGAT    3960

TGATTTACAA TAATAACTTC TATATCTTTT AATGTTTGTC TCTCCACTAT TGACAAAGAC    4020

TCTAATAAAC TATTTTTATC TCCTTGATGT AACAAAACAA CACTAATTGA GTAAGTCAGT    4080

TTGACTACCT CCCATAATTT TCTGATAATG ATTTTCTTTT TATTTAATTA TAGCACAATT    4140
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1083

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ATGATATATA TCAGGTAATA TCAAGCTATA TTATCTCTTA GCTACTCAAT TTGAAATTTT      4200

AACTTTTCCC TTTTCCGCAA AATAATAGTA TAATAGAGGT AGAATCTAGA ATCGAGGTAC      4260

ACCTATGGCT GTCAAATTTA CAAAACGAGA CGACTTGGAC AAGATGTTTG AAGAGTTTGC      4320

TAAACTCCCT GATTTGAAAC AAGTTACTTT CCCTGATGAC AAAGAGAAAA AAGTCAAAGC      4380

AGAAAAGAAA AACTAGATGA CTGCTTTTCA ACAACTCCCA TCTAGTGTAC TTCAAACTGG      4440

AGCCATTTTT CTCTCCATTA TCATTGAAGC CCTTCCCTTC GTTCTGATAG GAAGCATTGT      4500

CTCAGGGCTG ATTGAAGTTT ATATCACACC TGACAAGGTT TATCATTTTC TCCCTCGAAA      4560

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TGGAATCGTC CCCATCATCA ATCGTTTTCT GGAAAAAAAG GTTCCAAGTT ACACGGCCGT      4680

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CTTTGGCAAC TCCTTCCATG TCGCCCTATT ACGAGCTCTG GGTTCCATTC TTGTGGCTGT      4800

AATACTAGGA ATTTTTCTAG GATTTTTCTG GCAAGAACCG ATTCAGAAAG AAAATCGTCT      4860

GGCTTGTCAT GAGCATGATT TTTCTTACTT GAGTTCTGCA AAAAAAGTTT TTCAAGTCTT      4920

TGTGCAGGCC ATTGATGAAT TTTTTGATAC GGGGCGTTAT TTGGTATTTG GCTGCCTCTT      4980

TGCTTCTATA ATACAGGTCT ACGTTCCGAC TCGGATTCTG ACCTCTATCA GTGCGACCCC      5040

TCTTTTTGCC ATCCTGCTCT TGATGATTTT AGCCTTTCTT CTTTCGCTCT GTAGTGAGGC      5100

GGATGCCTTT ATAGGTGCTT CTCTTCTCTC GAGTTTCGGT TTGGCACCAG TTCTGGCCTT      5160

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AGCACGATTT ATCAGTCACT TCATAACAAT TGTAACTCTT GTCGTCTTAG TCTATTCTCT      5280

CTTGATTGGA GTTATCCTAT GATTCGATTT TTAGTTTTAG CTGGCTATTT TGAACTGACT      5340

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GCCTATATCT CCATGGTGCT TTCTTTTATC TTGGCTATCG TTCAATTGTA TATCTGGATG      5460

AAGCAAGTCA AAACCCACAG TCATCTGAAC AGCCGATTAG CCAAGATAAC GAGTATTTCT      5520

CTTCTGGCTA TTCCACTTGT CATCGGCTTA ACTTTCCCAA CTGTTAGCTT GGATTCTCAG      5580

ACTGTTTCTG CTAAAGGTTA TCATTTCCCC CTATCGGAAG GAACGGATCT AGCCATTCAG      5640

ACAAGCGAAG GGACGACAAG CCAATATTTG AAACCAGATA CCAGTTCTTA TTTTTCAAAA      5700

TCAGCCTATG AAAAGGAAAT GCGAACGGCG GCGGATAAAT ACTTATCCCA AGATAGTATT      5760

CAGATCACTA ATGAAAACTA TATGGAAGTC ATGGAGGCTA TCTACGACTA TCCAGATGAG      5820

TTTGAGGGCA AGACAATCCA GTTTACAGGC TTTGTCTATA ACGACCCCAG TCATGCCAAT      5880
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1084

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AGTCAATTTC TGTTCCGATT CGGCATTATC CACTGTATCG CAGATTCTGG TGTCTATGGA    5940

TTGCTGACCA AGGGCAATAC CCGGCAGTAT GAAAACAACA CTTGGATAAC AGCCAAAGGA    6000

AAACTGGTCA ATCACTACCA TAAAGAACTC AAACAAAACC TTCCAACCTT GGAAATCGAC    6060

AGCTTTACCA AAGTCGATAA ACCAGAAAAT CCCTATGTAT ATAGAGCTTT TTAAGAAAAT    6120

CAAGATAAAA ACGAACAAGT TCTCTTCTGA ATAACAGAAA AAGAGCCTGT TCGTTTTTTG    6180

TTATATGAAA ATTAGTGACT TGTAGATTTT CATCTTATAC CATTCCCAGC AATACAAGTA    6240

GCTCATAGAA AATAAGCGAG CCACTCATTC ATTAGACTAG CGATTTCTTT AGGTGCTTGA    6300

GTATAAAGCT CATGGCCAAA GTTTTCTAAA AAAATAGTAT CAAAATAGTC TGGCAATTCT    6360

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TCTCCCACTT CTCTCTTAAA AGCTTGTATT TTTCTCCGTA GcGGAGTATC GCTTCTATAT    6480

TTTCATAATT TATAGCCAAC TCATATCTAT TATACTCAAC ATTCCAGTGA TAAGACTGTC    6540

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GAACATCTAA GTCCGAAACA ATTTGAGATT TGATATAATT TTTAGTTTCC TCTAACTCTG    6660

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TCAGACAGAT AGATTCTTCC TCTACAATTT CATTTTTAAA CCATGATTTC AATTCTGTTT    6840

CATCTCGAAG ATGCTTTTCA TATGGATTTA GAAAATAGAC CTGCGAATCT AGTTCTTCAA    6900

GAAAATCCTT GCTATGATAG GCATTGCTTC CCAAACCGCC AATAAAATAT TTTTTCATTC    6960

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GGTATTCAAT TGAAATGCGT TTAATCGTAC GTGTTGTAGC ATGTTTTCTG ACAAAAAACG    7140

GGATTCGCTT AATCAAGTCT TGTGGGACTA GCGCCAGAAT CTTCTCAGTA GTTTCTTTGT    7200

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GATGAAACTA CAAAGAATAA ACTTTAAGAA ATCTTCTCAC TGATAAGATT TTAGCATTAG    7380

ACTTCCTGCG AAACAAAATA TGGTATAGTA GTTCTATGAA TTATGAAGCA AGTAAACAAC    7440

TAACTGATGC ACGATTTAAA CGTCTTGTTG GTGTTCAGCG CACGACTTTT GAAGAGATAT    7500

TAGCTGTATT AAAAACAGCT TATCAACTTA AACACGCAAA AGGTGGACGA AAACCTAAAT    7560

TAAGCCTAGA AGACCTTCTT ATGGCCACTC TTCAATATGT GCGAGAATAC CGCACTTATG    7620

AAGAAATTGC GGCTGATTTT GGTATTCACG AAAGCAACTT AATCCGTCGG AGCCAATGGG    7680
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TTTAAGTAAC TCTTGTTCAA AGTGGTGTTA CGATTTCAAG AACTCCTCTC AGTTCTGAGG      7740

ACACGGTAAT GATTGATAGC CATTCCCATC AATATCGTAT CTTTGGACAT AGCCAATAAA      7800

TGTTTCATTT TTGCGTGGTT TCTGGCTATT AACGATTGAA ATAACCCACC AACTTATCAA      7860

AAATAGAAAT AAAAATCCTA AGATTACTGT CATATCATAA CACTATTAAA GTTTAACCCA      7920

CTTATCATTA TCCATGATAA AAGGCTTAGC CAGTCCCTCG CCTGTATAAT CCGCATACTT      7980

GGTGCCCAAA TACTTGTAGC AATCTTCCTT ACTAGCAAAT TTAATCGCTT GGTAGGGCTC      8040

TTCGAAAGTC AATTTCTCTA CAAATAAGAA ACCGTCATCA GCAGGTACTA AGACCCCAAC      8100

GTGGCCTACA AACAGATACT CGCCATCCAA ATTGTCGTGC AAGACTACAG ACAGCATTCG      8160

AGCTTTTTCA TTGAATTGAA ATTGTGAGAA GAATGCTTCC ATCTTTTCAG CGTGAACCTT      8220

GACATCTGTA GTTGACTCAG TTGGAACTCT CGAAAATAGA ATATCAAACT CTTCCTTATC      8280

TTGTGAATCA AAGACCTTTC CTTTATCAAT CGCATCATTA TCTAGGAAAA GCAACTGGTC      8340

ATTCTTTTCA AGCTTTGGAA TGGTGACTGA ATTTTTCAAA AGACAATAAC TATTGATACG      8400

GCAGTTGGTC CCAACAAAAT CGCCCTTCTT TTGATTCCAG AGATGACTGA TTTTCTCAAC      8460

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GGTATTATAG TCATTAACGA GATTAAAAAA TGCATCAACA CTATTTGGAT CCAAGTGAGC      8580

TGATAAGAGA GATTTGACCT CTTCTGTACT TACCTGGTTG TTTAGGTTGG TGTATGAAGC      8640

TTTCCATGGA ACTTTCGCTG AACTGCTTTG CCTTTGATTC GTCCCCTCAG AAGTAGCATG      8700

TTGTTGTTGA CAAGCAGCCA AGCCTAAAAA CAAGGCTGAA CAGATTCCTA ATGTGGCTAA      8760

TTTTCTTGAT TTCTTCATTT CTTTCTCCTA AATGTCTTGG ATTAAAGTTT CTTTAACTAT      8820

TGCTTTACAG ATATTGATTA CTTTCTCATT TAATGTGTTC ATCGTCTTTC CTCCGG         8876
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(2) INFORMATION FOR SEQ ID NO: 171:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 14736 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 171:

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CGCAAACTTT CGCGGTCGGA AGGTAGTTTT ATGACACGAT TTGAGATACG AGATGATTTC      60

TATCTCGATG GAAAATCATT TAAGATTTTA TCTGGTGCCA TTCATTATTT TAGGGTTCCT     120

CCAGAGGATT GGTATCATTC GCTCTATAAC TTGAAGGCTC TTGGTTTTAA TACGGTAGAG     180
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1086

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ACTTATGTTG CTTGGAATTT ACACGAGCCT TGTGAAGGTG AGTTTCATTT TGAAGGTGAT      240

CTGGATTTAG AGAAATTTCT CCAAATAGCG CAGGATTTGG GTCTCTACGC AATTGTGCGT      300

CCGTCTCCAT TTATCTGTGC GGAATGGGAA TTCGGTGGCT TACCAGCTTG GCTCTTGACC      360

AAGAACATGC GAATTCGCTC ATCCGACCCA GCATATATCG AGGCAGTTGG TCGCTACTAT      420

GATCAGTTAT TGCCAAGACT GGTGCCTCGT TTGTTGGACA ATGGTGGCAA TATTCTCATG      480

ATGCAGGTTG AAAATGAGTA TGGTTCTTAC GGAGAAGATA AGGCTTACCT GAGAGCGATT      540

CGACAGCTAA TGGAAGAGTG TGGCGTAACC TGTCCCCTCT TTACATCAGA TGGTCCATGG      600

CGAGCTACTC TGAAAGCTGG AACCTTAATT GAAGAGGACC TCTTTGTAAC AGGAAACTTT      660

GGTTCTAAGG CACCTTACAA CTTTTCGCAG ATGCAGGAAT TCTTTGATGA ACATGGTAAG      720

AAATGGCCAC TCATGTGTAT GGAGTTCTGG GATGGTTGGT TCAATCGCTG GAAAGAACCG      780

ATTATCACAC GGGATCCTAA GGAATTGGCA GATGCAGTTC GAGAGGTTTT GGAACAAGGC      840

TCTATCAATC TTTACATGTT CCACGGTGGT ACAAACTTTG GTTCATGAA TGGTTGCTCA       900

GCTCGAGGAA CTTTGGACCT GCCCACAAGTT ACGTCTTATG ATTACGATGC CCTTCTGGAT     960

GAAGAAGGAA ATCCAACTGC TAAATATCTT GCAGTCAAGA AGATGATGGC AACACATTTT     1020

TCAGAGTATC CGCAGTTGGA ACCACTCTAC AAAGAGAGTA TGGAGTTGGA TGCTATTCCA     1080

CTAGTTGAAA AAGTTTCTTT GTTTGAAACC TTAGATAGCT TGTCAAGTCC TGTAGAAAGT     1140

CTCTATCCTC AAAAGATGGA GGAGCTGGGA CAAAGTTATG GCTACCTACT TTATCGAACA     1200

GAAACAAACT GGGATGCAGA AGAAGAAAGA CTTCGTATCA TTGATGGTCG AGATAGGGCC     1260

CAGCTGTATG TCGATGGTCA GTGGGTTAAA ACTCAATATC AGACAGAGAT TGGGGAAGAT     1320

ATTTTTTATC AAGGTAAAAA GAAAGGGCTA TCTAGGTTAG ATATCTTGAT AGAAAATATG     1380

GGGCGTGTCA ACTATGGGCA TAAGTTCTTA GCGGATACGC AACGTAAGGG AATTCGGACA     1440

GGGGTCTGTA AGGATCTGCA TTTCTTACTA AACTGGAAAC ACTATCCACT CCCACTAGAC     1500

AATCCTGAGA AAATTGATTT TTCAAAAGGA TGGACTCAAG GACAACCAGC CTTTTACGCT     1560

TATGACTTTA CAGTCGAAGA GCCAAAAGAT ACTTACCTAG ACTTGTCTGA GTTTGGTAAG     1620

GGGGTTGCCT TTGTCAATGG GCAGAATCTA GGACGTTTTT GGAACGTTGG CCCAACTCTC     1680

TCACTTTATA TCCCTCATAG CTATCTCAAG GAAGGTGCCA ACCGCATCAT TATCTTTGAA     1740

ACAGAAGGTC AATATAAAGA AGAGATTCAT TTAACTCGTA AACCTACACT AAAACATATA     1800

AAGGGGGAAA ACTTATGACA ATTGTAGGAT GCCGTATTGA TGGACGTTTG ATCCACGGAC     1860

AAGTAGCCAA TCTTTGGGCT GGAAAACTAA ATGTTTCACG CATTATGGTT GTAGACGACG     1920

AAGTTGTCAA CAACGATATT GAAAAGAGTG GTTTGAAACT TGCGACACCA CCAGGTGTGA     1980
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1087

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AATTGAGTAT TTTGCCAGTT GAGAAAGCTG CAGCCAATAT TCTTGGTGGC AAATACGATA          2040

GCCAACGTCT CTTTATCGTG GCTCGTAAAC CAGACCGCTT CCTTGGTTTG GTAGAAGCAG          2100

GTGTACCACT TGAAACCCTT AATGTTGGGA ATATGTCTCA AACACCAGAA ACTCGTTCTA          2160

TTACACGTTC TATCAACGTA GTAGACAAGG ATGTGGAAGA CTTCCACAAA CTGGCAGAAA          2220

AAGGTGTTAA ACTTACTGCT CAGATGGTTC CAAATGATCC AATTTCAGAC TTTTTGAGCT          2280

TATTAAAATA GGAAAAAAAT TTTTAGGAGG TCATTGTTAT GATACAATGG TGGCAAATTT          2340

TACTTCTCAC TTTGTACTCA GCTTATCAAA TCTGTGATGA GTTGACGATC GTTTCATCTG          2400

CAGGTTCCCC TGTATTTGCT GGTTTCATTA CTGGTTTAAT CATGGGAGAT GTGACTACTG          2460

GTTTACTTAT CGGTGGTAAC TTGCAACTGT TCGTTCTTGG GGTTGGTACC TTCGGTGGTG          2520

CTTCTCGTAT CGACGCAACT TCTGGTGCGG TTCTTGCGAC ACCTTCTCTG TTTCACAAGG          2580

AATTGATGCA CCGCTTGCCA TTACTACAAT CGCTGTACCA GTAGCAGCTC TCTTGACTTA          2640

CTTCGACGTT CTTGGTCGTA TGACTACTAC CTTCTTCGCT CACCGTGTGG ATGCTGCAAT          2700

CGAACGCTTT GACTATAAAG GTATTGAACG CAACTACTTG CTTGGTGCGA TTCCGTGGGC          2760

TCTATCTCGT GCCCTTCCAG TCTTCTTTGC CCTTGCTTTT GGTGGTGCCT TTGTACAATC          2820

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TATGCTTCCA GGTCTTGGAT TTGCAATCTT GCTTCGTTAC CTTCCAGTTA AACGTAACCT          2940

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GTGATGGAAC TCCTGAATTG AAAGAAATGA TGAAAGTTCA TACTCAATTC TTCAATACTT          3420

CACCATTCTT CCATACCATT ATCGCTGGTT TTGACCTTGC CATGGAAGAA AAAGATGGTG          3480

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TTGGGGATAC AATCTTTGGT TCACTTGTAC CTGCTATCAT GGGGTCAGTC GCAGCAACTA          3600

TGGCTATCGC TGGCCAACCT TGGGGGATCT TCCTTTGGAT TGCAGTTGCA GTAGCGTATG          3660

ACATCTTCCG TTGGAAACAG TTGGAATTTG CTTACAAAGA AGGGGTTAAC CTTATCAACA          3720
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1088

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ACATGCAAAG TACCTTGACA GCTTTGATTG ACGCTGCATC TGTACTTGGT GTCTTCATGA    3780

TGGGTGCTCT TGTAGCAACA GTGATTAACT TTGAAATTTC TTACAAGTTG CCAATCGGTG    3840

AAAAGATGAT TGATTTCCAA GACATCTTGA ACCAAATCTT CCCACGTTTG CTTCCAGCAA    3900

TCTTTACTGC CTTTATCTTC TGGTTGCTTG GTAAGAAAGG TATGAACTCT ACTAAAGCTA    3960

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TGTAATTCCT TATGACTAAA TCATTAATTT TGGTGAGCCA TGGTCGCTTC TGTGAGGAGC    4080

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TGATCATGGA AGGTCGTGAT ATTGACCTTT ACGCAGGGAT GAATCTTCCA ATGGTGATTG    4320

AATTTATCAA TGCGAGCCTT ACAGGCGCAG ATGCGGACTA CAAGAGCCGT GCTGCAGAAA    4380

GCATTGTGAA AGTTAATGAC CTGTTAGCGG GCTTCGATGA TGACGAAGAT GAATAATACT    4440

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GCAGCCTTCC TACAAGAAAT CGCTGATAAA CATGACTATA TTAAGGTTAT CTTGACAGGT    4920

GCTGGGACTT CTGCTTATGT GGGAGATACC TTGCTACCTT ATTTTAAGGA AGTCTATGAC    4980

GAACGCAAAT GGAATTTCAA TGCTATTGCG ACAACAGATA TCGTTGCCAA TCCAGCAACC    5040

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CGTTTTGAAG TTGTATCTAG TCTTGCCCGT AAAGTTTTAG ACAAGGCAGA AGATGTCAAA    5400

GAGCTCGTTG ATTTAGACTT TAACCGTGTC ATCTATCTAG GCGCTGGTCC TTTCTTTGGA    5460

CTTGCTCATG AAGCTCAGCT CAAGATTTTG GAATTAACTG CTGGTCAAGT TGCGACCATG    5520
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1089

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TATGAAAGCC CAGTTGGCTT CCGTCACGGT CCAAAATCTC TTATCAACGA CAATACAGTT      5580

GTTTTGGTCT TTGGTACAAC GACAGACTAC ACTCGTAAGT ACGACTTGGA CTTGGTTCGT      5640

GAAGTTGCTG GTGACCAGAT TGCTCGTCGT GTTGTGCTTT TGAGTGATCA AGCTTTTGGT      5700

CTTGAAAATG TCAAAGAAGT GGCCCTTGGT TGTGGCGGTG TCTTGAATGA TATTTACCGT      5760

GTCTTCCCTT ACATCGTTTA TGCCCAACTC TTTGCTTTAT TGACTTCACT CAAGGTAGAA      5820

AATAAACCAG ATACACCGTC TCCTACAGGT ACAGTAAACC GTGTAGTACA AGGTGTCATA      5880

ATTCACGAAT ATCAAAAGTA AGACAGTGTT TATGAATTCT TGACAAGAGG ATTTGTAAAT      5940

TATCAGATAA ACCATAGATT GTCAGTACGC TTTCTATGGT TTGTTTGCTT GAGAGAAATA      6000

GTAAAAGGAG AACAGAATGA AAGCATACAC AGAGCGTGTA TTTGGAAATG TTGAGGGTGA      6060

GGATGTCTTG GCCTATCGAT TTGAGACAGA CGGTGGCTAC CAACTTGAGG TTATGACTTA      6120

TGGTGCGACT ATCTTGCGCT ATGTCGCACC TGACAAGGCT GGAAATTTTG CCAATGTTAT      6180

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TGGGACAGGA GGGTTCCCTG GAAATCTCAA GATTTGGATC AGTTATCACT TGGAAGAAAC      6480

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AGAAGCCAAC CGTGATGTGG TCAAACACGT CTACAATGGT ACCTTGTTGA AGGATATCTT      6720

TGCAGAAGAA GATGAGCAAA TCCAGCTGGC ATCAGGTTTG GATCATCCAT TTGCCCTTCC      6780

TGCAGGCCAT GACAATGCTG GATTCCTTTA TGACCAAAAT TCAGGTCGCT TCCTGCTTTT      6840

CAAGACAGAA GCTCCTTGCT TTGTGGTCTA CACAGCAAAC TTTGTGGATG AAAGTGTCAT      6900

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CAGTAAGACA CGTTATGAAC TTGTTGTGAA GTAAAAGAGT CATTGCGCCT ACTTTTGGGA      7080

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GCTATCTGTT AATATAATAT TCAAACTACA ATAAGGAGTA AGAAAGAAAC GAAGAAAATT      7200

GTATTTGCTA GTGCCTTGGC TTTGACCTTG GCTGGAGCAG TTTTGACAAA TGATGTTTTT      7260
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                                    1090
GCGAACGACA GACTTGTGGC AACACAAACT ACTGATGGTA AAAATGAAAA TGTATTGACC    7320

TCAGAGGTGC TAAAACCTTC TAGTGGCAAT GTTTTGGTTG GAATCAAAGG AGAATTTGTG    7380

GCTCCTCATC AACAATCTAT TTTGGATGCC ATCAATGCTA TCTGTAAAGA AGCGGCTGAC    7440

GAAGGTTTGG TAGATAAGTA TGTCCCTATC AAATGATCAA CTGACCTAGA AAAGGCAGCT    7500

TTTGCCAGAG CTACAGAAGC ATCTATAACC ATGGATCATA CCCGTCTTTC TAGCAAAGAT    7560

CTTTGGAGTG CCTTTCCAAC TTCTAATAGT ATAATGGGAG AAAATTTGGC ATGGAATCAT    7620

GACGGTTTTC TAAAAGCTAT TGAACAATGG CGTGCTGAAA AAGCAGATTA TGTGGAGAAA    7680

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AATTTACTGT ATTTTTTATA GTATGCAGAA TATTTTTAAG TATATTTCAA TAGAAATTTC    8700

TATCGATTTA TTGTATAATG ATAAGTAATT GTTGAAAAGT ACTCAGAAAA TTCCATACTA    8760

TATTATTTTT ATGTTATAC TTTTATGCTA TAAAATATAG ATTGATATAA AGAATATAGA     8820

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GGGATTCAAT CGGTATCGGC CGATAATATG GAAAGTCCAA TTCATTATAA GTATATGACC    9000

GAGGGTAAAT TGACAGACGA GGAAAAAATCC TTGCTGGTAG AGGCCCTTCC ACAACTGGCT    9060
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1091

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GAAGAATCAG ATGATACTTA TTACTTGGTT TATAGATCTC AACAGTTTTT ACCGAATACA          9120

GGTTTTAACC CAACTGTTGG TACTTTCCTT TTTACTGCAG GATTGAGCTT GTTAGTTTTA          9180

TTGGTTTCTA AAAGGGAAAA TGGAAAGAAA CGACTTGTTC ATTTTCTGCT GTTGACTAGC          9240

ATGGGAGTTC AATTGTTGCC GGCCAGTGCT TTTGGGTTGA CCAGCCAGAT TTTATCTGCC          9300

TATAATAGTC AGCTTTCTAT CGGAGTCGGG GAACATTTAC CAGAGCCTCT GAAAATCGAA          9360

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CCGGCTTTAG AGGTCACTAC ACGAAATAGA ACGGAAATCC AGAATATTCC TTATACAACA          10140

GAAGAAATTC AGGATCCAAC ACTTCTGAAA AATCGTCGTA AGATTGAACG ACAAGGGCAA          10200

GCAGGGACAC GTACAATTCA ATATGAAGAC TACATCGTAA ATGGTAATGT CGTAGAAACT          10260

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TATCGTAGAT ATTTAAGTCT AAGTGAAGCG CCGACTGATA CGGCTAAATA CTTTGTAAAA          10740

GTGAAATCAG ATCGCTTCAA AGAAATGTAC CTACCTGTAA AATCTATTAC AGAAAATACG          10800
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1092

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TACAAAGATG ATTACACATT TACTGTAGCT AAATCTAAAG CAGAGCAACC AGGAGTTTAC    10920

ACATCCTTTA AACAGCTGGT AACAGCCATG CAAAGCAATC TGTCTGGTGT CTATACATTG    10980

GCTTCAGATA TGACCGCAGA TGAGGTGAGC TTAGGCGATA AGCAGACAAG TTATCTCACA    11040

GGTGCATTTA CAGGGAGCTT GATCGGTTCT GATGGAACAA AATCGTATGC CATTTATGAT    11100

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GGAAATAATG AGACTTCAAC GTTGGATACT ATTGTCGCAT TAGGAAATAG TGGACTAGAT    12600
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1093

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AATAACGAGT GGTTTAAAGA AAATACAAAG GCATATATAG TCGAAATGAA GTCTGATATT     12780

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CAAGATAATC TGAAACCAAT AACAATTCAA TACGAATTAG GTAATCCTAA TAGTACAAAA     14220

GAAGTAACTA TAACAACGGC TGCACAAATG CAACAATTAA TTAATGAAGC GGCTGCGAAA     14280

GATATTACTA ATATAGATCG TGCAACGAGT CATACCCCAG CAAGTTGGGT GCATTTATTA     14340
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1094

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AAACAAAAAA TCTATAATGC ATATCTTCGC ACTACAGATG ACTTTAGAAA TTCTATATAT    14400

AAATAAGATT GTAGAGTTTC ATTGTTGAGT AGTGTTTCTT GTAAGGATGA GGAGTCAGAT    14460

GACAAATCGA CTCCTTTTTC TTATGGATCG ATGTAGAGAT TTGATTGAAT GCAGATTGCA    14520

GGAATCATCT TCAACTCATC AACGACCAAT GGTGACAAGG TGGATTTCAA TCCCACAGAA    14580

AATGTTGATT TGAGAAATAA CTTTGCTAGT CTAGTAAAAT AAATACAAAA CAATCCTAGA    14640

AGATTTTTTC TGGGATTGTT TTTTGCTGAG TGGGATGCTT CAAGTTGTCT GGCTTGACTT    14700 .

TCTTGAGGGA AGTTATATAA TAGTTGTAAT AATTAG                               14736
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(2) INFORMATION FOR SEQ ID NO: 172:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 11770 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 172:

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ACAGGAAAGC ACGATAGCAA TCTCTTTGGA AGATTTAAAA AATATTCCTC AAAGTTTCGC     60

TGTTGCTTAC GGTGATACGA AAGTATCTTC GATTCTCTCT GTCTTGCGTG CTAATTTAGT    120

AAATCATTTG ATTACAGACA AAAATACAAT TTTAAAAGTT TTGGAAGAAG ATGGGGATTT    180

GACTTTTAGA GAGATTCTAG GTGAGTGAAA ATGATAGACT GATTCAGTTT ATCGTTTTTC    240

TTTTTAGTTG ATTGCACATT TGTGCTTATA TAAACAAAAA TAGTTTATCT GTTGTTTTTG    300

GATTGACAAC TTTATTATGT AGTTGTATTC TATAGTTACA AAAGAAAATT TTAAAATTTC    360

AAATGAAAAA AGCTTTTTAC ATAGTGAAAT GAGGAGGAAT TTATGGAAAT GATTGTTCCA    420

GATCAAATTA TCATGGGTTT AATTTTATAT GCTGGTGATG CGAAACAACA TATTTATAAA    480

GCGTTAGATT ACATAAAAAA TGGTACATGT GAACGGTGTG AAGAAGAAAT ACAGTTAGCT    540

GATGCAGCCT TATTAGAAGC TCATAATCTA CAAACAAAAT TTTTGGCACA GGAAGCGTCT    600

GGTACAAAGA CAGAAATTAC AGCTCTCTTT GTTCATTCAC AAGATCATCT CATGACCAGT    660

ATGACGGAGA TTAATTTAAT CAAAGAAATT ATTAGTTTGA GAAAAGAACT TCATAAAAAA    720

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GGTTTGTTTT GTGCAGCAGG TTTTTCTACT GGTATGCTTG TAAATAATAT GAAAATTGCA    840

GCGCAATCTA GTGGAGTTGA GGCAGAAATA GAGGCGTTTT CTCAGTCTAA ATTAGCGGAT    900

TATGCGCCAA ATATAGATGT TGCACTATTG GGTCCACAAG TTGCTTATAC ATTAGATAAA    960

TCAAAAGAAA TTTGTGATAA GTGTGATGTT CCGATAGCTG TTATTCCGAT GATGGACTAT    1020
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1095

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GGTATGTTAG ATGGGAAAAA AGTATTAGAT TTGGCCCTAT CTTTGATTAG TGGGTAAGAA    1080

AAGGAGATTT ATTATGTCAA AGATGGATGT TCAGAAAATC ATTGCACCGA TGATGAAGTT    1140

TGTGAATATG CGTGGCATTA TAGCTCTAAA AGATGGGATG TTAGCAATTT TGCCATTGAC    1200

AGTAGTTGGT AGTTTGTTCT TGATTATGGG ACAATTGCCG TTCGAAGGAT TAAATAAGAG    1260

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TTTTGCTATT ATGGGTCTAA TTTCTTGTTT TTCAATTGCC TATTCTTATG CTAAGAATAG    1380

CGGAGTAGAG GCTTTACCAG CTGGAGTTCT ATCTGTATCT GCATTCTTTA TTTTGCTAAG    1440

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CTTCTTTATA AAGAGAAAAA TTGTTATTAA GATGCCAGAA CAAGTTCCAC AAGCTATTGC    1620

CAAACAGTTT GAAGCAATGA TTCCAGCATT TGTAATTTTC TTATCTTCTA TGATTGTATA    1680

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AGGTTCAGGG ATTACGTTTG GTCTTGTAGT TGCCATGCTT TTTGCAGCAA AATCAAAACA    2040

ATACCAAGCC TTAGGAAAAG TTGCAGCTTT TCCAGCAATA TTTAACGTAA ATGAGCCAGT    2100

TGTATTTGGA TTTCCGATTG TCATGAATCC AGTTATGTTT GTACCTTTCA TTCTTGTTCC    2160

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GGAACAACCT AATGTCCTAA AACGTGCATA TATGCTGAAA GAAATTTTGG AAAATATGAC    2760
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1096

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TATCTATATT GAAGAAGAAT CTATGATTGC GGGAAATCAA GCTTCTTCCA ATAAAGATGC        2820

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GCGTGATGGA GATGTTTTCT ATATTACAGA AGAAACAAAA GAACAACTTA GAAGTATTGC        2940

TCCGTTTTGG GAAAATAATA ATTTACGTGC TAGAGCTGGT GCCTTATTAC CTGAAGAAGT        3000

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TCAATCAGTT TGGTTTATTC AATGTATTTT ACAAATTGAA TCTAATGGCC ACTCTCTTTC        3420

ATATGGCCGT TTTGATCAAT ATATGTATCC ATATATGAAG GCTGATTTAG AAAGTGGTAA        3480

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GCCTATTGGA GGAATTCGTT ATTCAGGAAC ATCTTCTATC TCAGCCAACG TAGGGCAGGG        4560
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1097

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CAATGTTCTT TCTAAGGCAA CCCAAGATGA CATTATAGGA CGTACTGAGC ATACTTTGTA       4980

AAATAAAGAG GTTCTTTTTA TGGAATTTAT GCTTGACACA TTAAATTTAG ATGAGATTAA       5040

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TATTGATAGA CAGAACTCTC CTAGTAAGAT TTTAGCTGCA TCCTTTAAAA ATGTAGCACA       5520

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ATCAGCTTTC GCCATGCCAT CTATCCAAAA GGCGGTTGAT GATTTTTCTG ACGATTGGTT       5640

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1098

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GAAAATAGAC CTAAAGAAGA ACTTGATAAG TATATTGAGT TTTACAAAAA AATTGGTATG      6600

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TAAGTGGCAG GGCTACTGGG CAGAACATCA TACATTTAAG ACAGGAACAC ATACATCAAA      7320

ACCTAAGTTT TATGCGCTTG ATATGTTCCC TTATCCGTCT GGAGCTGGTC TGCACGTAGG      7380

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GGATACTGGT AATGACCCAG CAGAATTTAC AGCGGAAAAC ATTGCCAACT TCAAACGTCA      7560

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CACAAGTTCA GAGCAAGCAG AAGCTGTAGC AGACTATAAA CACCAAGCCA GCCTTAAGTC      8100
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1099

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GCCACAATGG GCTGGTTCAA GCTGGTACTA CCTCCGCTAT ATTGACCCGC ACAATACTGA    8760

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CCTCGGTGTT GTTCCGACTA AGGAACCATT CCAAAAACTC TTTAACCAAG GGATGATTTT    8940

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TGATGGTTCC TTCTTCCATG TAGAAACAGG GGAAGAGTTG GAGCAAGCGC CAGCCAAGAT    9060

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AsCCAACTAA ATTAGTTAAC ATTGTTGTGA AATAAGATAG GAGTCCTTCA GAGTAGAATC    9840
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1100

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GCTAGGATAG AGGCTCTTTC AGTGGAAAAG CATGCGGAGG ATTTATTAGC TGTTTATGGC     10080

CCTGATACGC CTCGGGAGAT GTGGACCTAC CTCTTTCAGG AGTCAGTAGC AGACATGGAG     10140

GAACTGGTCA GCCTTTTAAA TCAGATGTTG GCTCGTAAGG ACCGTTTTTA TTATGCAATC     10200

ATAGACAAGG CAACTGGTAA GGCTTTGGGA ACTTTTTCCC TCATGCGAAT TGATCAGAAT     10260

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GATTGGTTGT CTATGATTGA TAAGGACTGG CCTCAAGTCA AAGCTCGATT GGAAATATGG     10560

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GAGGTGTTGA GATGATTACT ATTAAAAAGC AAGAAATTGT CAAGCTAGAG GATGTTTTGC     10680

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CAGATTTCCT ATTTTCACTG TAACCTTTTA ACGTCCTCAT ATCTTGTATA AACGAGGAAA     11520

GATGTACGAC TTATCCCGTG AGGTTTCATG AGCGCTGAAA GCGTAGTAAC AACGAATCAT     11580

GAGAAGTCAG CCGAGCCCAT AGTAGTGAGG AAACTTCCGT AATGGAAGTG GAGCGAAGGG     11640
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1101

GTGAATACTC AAACAGTCTG GGGAGAGACT GTTTGAGGTC TGTCGCTAGA AAGAGAAAAC   11700

GACAGATCGA AGTAATCCTA CTTCACTTGT GTCTGTAAAA TGAGTGGTCT GATAGAACTG   11760

GACTTTGAGG   11770

(2) INFORMATION FOR SEQ ID NO: 173:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 4185 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 173:

CGCGAAACTA CTTTCTTAGT ATAACACTTT CAGAATCATT GTCAATAGAA ATGACTTGAT   60

TTTTTCAATT TTTTCAAGCT ATTTCCAAGG GTTGTAAAAT CGTCCCTGAT TCTGCAAGAT   120

AAGTAGTAAA CTAACTACTA AAACAAGGT TGCCAAGAGC AAGGTAATAT AGTCTCCTTT   180

TTTCAAGGCC TGATAACTAT ACCATGTGCG TTTTTTCTCT TTCCCAAAGC GGCGAACTCC   240

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AGCAGATTGC CTTTGATTCG TTGCATAAGA GAAGCTTTCT TGGATAATTC CATCCCACGC   360

GCCTCCTGAG ACATCTTGAT AGTAAAGAAT TCTTCCTGCA AATCTGGAAT ATAGCGCAAG   420

GTCAGGCTGA CAGAATAAGC AATCTTATAG GGCACACCAA TTTGATTTAA ACTGGAAGCA   480

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CCCTGCCAAA TCACACTTCT CTCTCCATAA AGTCCAACCC CATACTCGGG AGAAAAGAGA   660

TAGACCATCA AAACGTTTAA AACGGCAAAT ATCGTCGCAA AAACGGCTAC AAAGGAAACA   720

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AGCATTCTGG TATCATAGCT AATCATGGCC GCCAATGATA CCAGAATGAA AAAGAGAAGT   840

TTCCCAGCTC CTGACAAGCG ATGAATCACA GTATCTCTAT GCTGGTAACC GATTAATTTA   900

GCTTGCATCC CTCTCTCCTT TCTTTGTAAA ATGCCGTTAA ATCCAGTGGA TCCACATCTA   960

GTTTCTTAGC CAAGTTAAAG ATGGAGGTTT CTTTTAGATT GGCTTTTACT AACAGCTCAG   1020

GATCGCTCAA CAGACTGGCT GGAACAGTAT CGGCAATCAA TTCTCCATCC ACCATGACAA   1080

GGACCCGGTC TGAATAATCC AGCATCAATT GCATATCATG GGTAATCATG ACAATGGTAT   1140

GCCCTTTTTG ATGTAACTCT TCGAGAAATT CCATAATCTC AGTATAGTTC TTCTGATCTT   1200

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                                    1102
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TGGTGACACG TTTTTTCTGA CCAAATGACA GGGCAGAAAT AGGCCAATTA CGGAATTCAT    1320

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CTCGCAAACG GAGCCCTAGA GCCACCTCAT CAAAAATCAT ATTGGTTGAA ATCATTTGAT    1440

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TATCCTGTTT TTCCCAAAGA TAGCGTCCTT CCGTCTGAAT AAAGCTACTT ATAGCCTTGG    1560

CTAGAGTTGA TTTCCCTGCT CCATTTTTTC CGACAATAGC AATCTTTTCA CCCTTTTTAA    1620

TATCTAAATG TAGGGATTTT AAAATCGGTC TATCATCATA AGAAAAAGAT ACTTCCTCTA    1680

GTCTAAAGAG TGACTGCAAT GCTGGGGTTT CTTTTGCCAG TTCATTCTGC AACTGAACCT    1740

GACCTTTTGA GATAGACAAG TTATCCAGAT TCGCTAATTG TTCTTCCTTG ACTAAGTCCA    1800

CACCTAATTG ACGGAGAGTC GTTAGATAAA GGGGTTCTCG AATTCCATTT TGAGTCAATA    1860

AATCAGTCGC AAGCAACTGG TCAGGGCTCC CATTAAAAAG GATACGACCA TCGTTTATCA    1920

AGACAATCCG ATCCACAGGG CGATGCAGAA CGTCCTCCAA ACGGTGCTCG ATAATAAGAG    1980

TCGTCGTCCC CTCTTCCTTA TGAATCTGGT CAATCAATTC GATAATATCC TGACCTGACT    2040

TGGGATCTAG ATTGGCGAGT GGCTCATCAA ACAAGAGAAT CGGACTTTCA TCAATCAAGA    2100

CACCAGCCAG ACTGACTCGC TGCTTTTGTC CACCTGACAA ATCCTGAGGA CGCTGATCCA    2160

GTAAAGGAAG AAGGTCCAGC TTTTCAGCCC ATTTATAAAC ACGACCTTTC ATCTCATCTA    2220

GGGCTGTCAC ATCATTTTCC AGAGCAAACG CCAAATCTTC TGCCACAGAC AAGCCAATAA    2280

ACTGCCCATC TGTATCCTGC AAAACTGTGC TAACCAGATG AGACTTATCA TAGATGCTCA    2340

TATCAAAGGC TACTTGACCC TTTATCAAAA ATTCTCCATA TGTCTGACCC TTGTAAATAT    2400

TGGGAATAAT CCCATTCAAA CACTGACCCA AGGTAGATTT ACCTGACCCA GATGGTCCAA    2460

CAATTAAGAC TTTCTCTCCC TTGTAAATGG TCAAGTCTAT CCCTTGCAAG GTCGGTTCTT    2520

GTTGTGTTTC ATACCGGAAA GAGAAATCCT TCCACTCAAT TaTAGCTTCT TTCATCTTAC    2580

TCTCTTCATT CGCTTCTTAG ACTTCTATTT TATCATAAAT CAAGCCCTTC TTGCAGTCTC    2640

TCCTCTTAAA ATCTTAGCGC CAAAAAGATT CCTATCCTAG CTTACTTGCC TAACTAATCT    2700

ATAAACATCG AAAAAGACTA GTTGCCCAGC CTTCCCCATC ATTTTATACT CTTCGAAAAT    2760

CTCTTCAAAC CACGTCAGcT TCGCCTTGCC GTAGGTATGG TTACTGACTt CGTCAGTTTC    2820

ATCTACAACC TCAAAACCAT GTTTTGAGCc TGCTTCGTCA GTTCTATCCA CAATCTCAAA    2880

ACACTGTTTT GAGCAACtGC GGCTAGCTTC CTAGTTTGCT CTTTGATTTT CATTGAGTAT    2940

TAGTCCTTTT TCAAACTTCC TGCACGAGTT TGGGTTCCTG CATAGGCAAG TAAGAGAAGA    3000
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1103

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GTTCCTGCAA TAGCTACAGA TACACCATTG GCAATTCCCG CAACAATCCC TTGTGCAAAT      3060

ACTTTTTCTG CCGCTTCTTG ATAAATCACA ACATCTCCAA GTGGTGCCAA GACACCCCAA      3120

ACAAGGGCAT TTGCAAGTAG TTGAATGAGA TTAAAAATAA GAATATCTTT CCAGTCAAAA      3180

ACACCATTGA TCACGCGAAC GTACTTTCTA AAAAGTCCCA CAACTAAACC AAAGAGTCCG      3240

CTAGCGATAA TCCAAGTCCA CCATAGACCA TAACCAACAA GAGAGTCCTT GATTGCATGA      3300

CCAATCAACC CGACAAGCAA ACCGATAATC GGTCCAAAAA TAATAGAAAG TAGCGCTTGT      3360

ACCGCATACT GAAGCTGGAT GCTTGTATTT GGAACAGGGG TTGGAATGTT GATCATCCCG      3420

ATGACGACAA AGAGGGCAGC GCCAATTCCG ACAGCAACAA CTTGTTTAAT TGTAAATTTG      3480

ATTTCCATAC TATTCTCCTA TTTTATCCTT CTATTTTCTT TATTTCAATG GTCCAAGATG      3540

AACCGACACC TACATTATAG GCCTTGGCAA AGGAACCTTG GTTGATAGCC AAACCTAAAC      3600

GATAGAGAGA GTTGATGTAA AGGATGGGTT GCCCAATTCT CACATCTGCA AATGATTTGC      3660

CATAGACAAC CTGATTTTGA TAGACCAGCA TATCAGCATG ATAGATGGTC ACTTCAAAAC      3720

GATCACCAAA TTCTGGTTCC AGCTTGTAAA ATTCTTCCCG TGTGATAGAG GTCCAAAGCG      3780

AACCGAAACG CACATCCAGA ATATCAATGG CTCCCTTCAC CAGATGATCT TCTATGATGG      3840

TCGCTACGAC TGGAAGCTCT ACAATCTGTT CCACACTGAG CTCTGGCCCT ACTTCCTCAA      3900

AAGTAATGTG ACCACTGGCC AGTTTAGCAC CAGTATAGGC ATAGACATCA CGACCGTGCA      3960

AGGTATAAGA ATGCTCTGTG TTTTGACGCC TATTGGCCAC CTCAGAAATC TCACGAATGG      4020

CTACAATGCC AACGTGTTTC TTGATAAAGG AAAGCGTCCC ATTATCTGGC GTGACAATGT      4080

ATTGATTTTT TGCAGTCTTG GCAACTACAC TCTTACGTTT CGAACCGACA CCTGGATCGA      4140

CAACCGATAC AAACGTCGTT CCCTCAGGCC AGTAATCCAC CGTCT                     4185
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(2) INFORMATION FOR SEQ ID NO: 174:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 2069 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 174:

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TGATAGAGTT AAAGCCGCTG AGTCATTCAA TCCATCTCCA ACCATCAAAA TAGTGTGACC       60

TGCTTTCTGC AGTTTCTCTA CTAACTCAAA TTTCCCATCA GGTTTCAAGT CTGTATAGAC      120

CTGATCAAAG GGCAAATCTT TGACTAATTC CTCTGTCCTA ATCAAGGTGT CTCCTGTTGC      180
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1104

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CAGAATCAAT TTTTyCCCCT GTGCCTTAAG TTTATCCAAG GCTGTTTTTG CTTCTTTTCT      240

CAAAGGAGTA TGAATGCAGA ACATTCCAAT CAATTCATTT TGATAAGCCA AGAATAAGAG      300

ATTGTAGTGA CTCTTGTACT CTTCAATTAA AGCATTTTGT TCTGAACTGA TATGAATCTG      360

CTCATCCTGC ATCAAGACAT AATTCCCAAT AAGAACTGGT TGGCCATCTA TATGAGATTT      420

GATCCCCTTG CTTGCGATAT ATTGGAGTTT CCCATGCATT TCCTCATGTT CAATTCCCTC      480

TATCTCAGCT TGCTTGACGA TGGCATTAGC AATAGGATGA TAAATGTGTT CCTCAAGACA      540

GGCACTGATT CTGAGAATAT CTTCCTCACT ATAGTCTCCA AAAGGTAACA CCTTTTCAAC    · 600

TATAGGATAA CTAGTTGTGA TTGTTCCTGT CTTATCAAAC AAGAAAGTAT CAACTTCCAG      660

ATATTTCTCC AGAACATCTC CATCCTTAAT CACCATTTCA CGGTTCAACC CTTCCTTGAT      720

AACTGTCAAA TAAGCTACAG GAGTAGAGAT TTTCAAAGCG CAGGAGAAAT CGACCAATAG      780

GAAAGAAATA GCCTTAGAAA AAGAACCTGT CAATAGGTAA GTCAGCCCAG CCCCCAAGAA      840

ATTATATTTG ACGACTTTAT CCGCCATCTT GATGAAATAG CGTTGTTTCG TTTTCTTGTT      900

TTCTTCAGAT TTCTTCATCA ACTCAATCAG CTGTAAAATA CGGCTGTTCA TCTGATTATC      960

TGTTACACGA ATGCGTAACT CTCCAGTTTC TAATACTGTA TTTGCACAAA CCAAATCAGA     1020

CTCTCTTTTT TCAACTGGAA AACTCTCTCC TGTCAAGGAA CTTTCGTTGA CCATACCTAA     1080

ACCTGAAACT ACTTGTCCAT CAAACAGAAT TTCATTTCCT TGAGATAAGA TCAAGACATC     1140

TCCTATTTGA ACATCGGAAC TCTTGATACT AACAACCGTA TCGCCCTGTA CTAGGAATAC     1200

ATCGCTCTCT TTTGCAAGAA GACTCTGTTC TAAATCTGTT GCAGTTTTTT TCAAGGACCA     1260

CTGATCTAAA TGATTCCCCA AATCAAGCAT AAACATGATA TTGCTAGCTG TCTTGGATTG     1320

GTTCATAAAC AAAGACAATA AAATAGCCGA ACAGTCCAAG ACTTCCATCG TTAGTyCCTT     1380

ACGCGCTAGT GTTTGATAGG CTTCTCTAAT ATAACCCAAA GCCTGATAAC AAGTCCATAT     1440

ATAGCGAATA GGATACGGCA CAAAACTACG AAAAAGTACA CGCTTAACCG CTGCACCTGA     1500

AACAATAGAA TAAGCACTCT CTTCTCTACG AATGGGAAGA GTCATCAACT CAGAAACTTT     1560

CCCTTTATCA ATTCTTTTTA AAAAGGCTTC TGCATTATCT AATACAGAAA AGCCTTCTTT     1620

TATGCGTAGA GTAAAGTGCT GTTGATCCAT GTAAAACTGG ATAGACTCAA TCCCCTTTTC     1680

ATCTCTCGCC AAGGAACGAA GATAGTCTTG AATATCCAAG GTAAGTGAAA AAGAAGATGA     1740

TAGTCGGATA TGTTGGTATC CTCTATGTAG CACTTTAAAA GACATATTAT TCACCTATAA     1800

GGCTATCTAA TTGCTCTTCT TTTTTCTCTT GCTCGTACAA ATATTTGGCA TCTTGCAAGA     1860

CATCGTCTCC ATGTTGCTTC ACAACAGAAA CAGATGCATC TAGCTCGTCT TTCAACTTGT     1920

AAGCCTTAGC CAAAGCTTTA GAATAACCTT TTTTAGCTTC CTTACTTGCT AAGATTTTCA     1980
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1105

AACCAAGGGT ACCAAATGCG ACACCACCCA AAAATAATGA AGATTTTTTC GCAACTTTTG   2040

CAACGGTTAA TACTTCTTTT AACATAGGG   2069

(2) INFORMATION FOR SEQ ID NO: 175:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 4597 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: double
      (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 175:

AAATCTTGCG CAATAAAGCT CATCTCCATC TCCCGATTGA AACAGTCACT CCCCGGACTG   60

TTTCAACGTC CCAAGACATA ATCTTAGGCA GATTTCTAAA ATTACACTCA AAGTGGAAGT   120

CATTGAGCTT TCGAATGACA GTTGAAGTTG AAATGGCCAG CTGATGGGCA ATATCGGTCA   180

TAGAAATCTT TTCAATTAAC TTTTGCGCAA TCTTTTGGTT GATAATACGA GGAATTTGGT   240

GATTTTTCTT GACGATAGAA GTTTCAGCGA CCATCATTTT CAAGCAATGA TAGCACTTAA   300

AACGACGTTT TCTAAGGAGA ATTCTAGTAG GCATACCAGT CGTTTCAAGG TAAGGAATTT   360

TATAGGGTCT TTAATGTCTA GTAATTTTGT GATAAAATGT AATTGTTCCA TATGATTCTT   420

TCTAATGAGT TGTTTTGTCG CTTTTCATTA TAGATCTTAT GGGACTTTTT TTCTACCCAA   480

AATAGGCTCC ATAATATCCA TAGGGAATTT ACCCACTACA AATATTATAG AGCCCAAAGT   540

TTTAGGTCGC TTGATAATAT GCGTTTTTTG AATTTTATAG ACTGCTCGTT TAAACTCTAT   600

TTACTTCGTA CCTTCTGGAG CGAGACGGAA TATTAGTCAC ATACAAAATG AGTACTATTA   660

GGATTTTATT TTCATGTACA ATTTCAGCCA GTCTTGTTAT AATCAGCCTA TAGGAATCAA   720

GGAGGTGACT CTTATGGCTG TTTTTGTGTC TTTGGATGGA ATTGTGGTAG AAGTCCTTGA   780

TGTCTTTTCT TCTTTTAATG GGGATAGTGA GTTTTTCTTG TGTATAGCAT TTTGAATCTG   840

GAATAGGACG CCATGACTGC TAAAAGATTT CTATAAATTA ATTTGATTTT CCTAATCAAT   900

TTGTTCATAT CTTATTTCAT TCCACTATAA ACGTCTTAAA GACAAGAGTC AGTTTGTTAT   960

GGAACGCTCT CAGTTCGAGG AGATGTTCCA ACTTCAAAGT AGTCGCTTGA CGACGCAAGA   1020

AAAATTACAA TTGTTTACCT CTGTGTTTGC TGGCCGTTAT GATGTTTATG CTAAGAATTT   1080

TATCAATGAA CAAGGGAAAA TTCAGTATTT TCCTTCCTAT GATTATGGTT GGAAGCAGTT   1140

GCCACCTGAA AAACGGAGTT TCCAGACATT GACGAACTCC GTTTTGAAAT CTCATTTTCG   1200

TGGGGAGGCA GCTATCGGTA TCTTTCCTAT GCACTTAGAT GATAGCTGTT ATTTTTTGGT   1260

1106

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ACTGGATTTG GATGAAGGAG ATTGGAAAGA AGCTGGTTTA ACCATTCGAA GAATAGCCAG     1320

GGAACGCCAG ATGGAAGCCC ATTTAGAGAT TTCTCGTTCG GGTCACGGAC TCCATATTTG     1380

GTTCTTCTTT GAGGAAGCGA TTCCGAGTCG AGAGGCTCGC TTGTTTGGAA AGAAACTGAT     1440

AGAACTGGCA ATGCAGGAAA GTATGCAACT GTCCTTTGAT TCTTTTGATC GCATGTTTCC     1500

AAATCAGGAT GTCCTTCCTA AGGGGGGATT TGGAAATTTG ATTGCCTTGC CTTTTCAAGG     1560

AGAAGCTTAC CATCAAGGGC GAACGGTCTT TGTGGATGAA CAGTTTCAGC CTTATGAAGA     1620

CCAATGGAGG TATCTACAAG AAATTCAGAG GATTTCAACT GCTAAAGTGG CACTGTTAAT     1680

CCAAGAGGAG TTAGGCAAGC AAGAATTGGA TAAGGAGTTG AAGGTCGTTT TATCCAATAT     1740

GATCCAACTT GAAAAATCGT CTGTGACATC CAAGGCACTT TTTTCTTGAA AAATATGGCT     1800

TCCTTTTCTA ATCCCGAATT TTATAGTAGA TTGAAACTAG AATAGTACAC CTCTGCTTCT     1860

AAAACATTGT TAGAAATCGA TTTGACTTTC CTGATCGATT TGTCCTGTTA TTATTTCATT     1920

TTACTATATT TAAAGCAGGC TATGCGACAG CCAACCTATC AAATTCCTGA GAGAATGTAT     1980

TTATTTGGAG AATCCGATCA TTATTTATGG TTGCCAAGAG GTTTGCTGTA TCCATTGCAA     2040

GATAAATTTA AGCAGGTATC TGTGGAAGAT AGGAGAAAGG TACAAAGGTC TATTAGCGTG     2100

GAATTTAAGG GAGAACTCAC TTTTGAGCAA GAGTTAGCCC TGTCAGATAT GACTTCTAAA     2160

GAAAATGGTT TACTTCATGC GGAGACTGGT TTTGGGAAGA CCGTTTTAGG TGCTGCTCTT     2220

ATCTCTGAAC GGAAAACAAA AACAATTATT CTAGTCCATA ATAAGCAACT CTTAGACCAA     2280

TGGCTAGATC GCTTAAACTG CTTTTTGACT TTCGAAGAGG AGGAGGCTAT CCGTTATACG   .  2340

GCATCAGGTC GTGAAAAGGT AATCGGCTAT GTTGGGCAGT ACGGTGGGAC TAAGAAATGG     2400

CTGAGTAAAC TGGTTGATGT CGTTATGATT CAATCTCTAT TTAAGTTGGA AAATAGTCAA     2460

AGTCTTTTGG ATGAGTATGA GATGATGATT GTGGATGAGT GTCATCATGT CTCTGCCTTG     2520

ATGTTTGAAA AAGTTGTTGC TCAGTTTAGA GGGAAGTATC TTTACGGTTT GACGGCTACG     2580

CCTGAGCGTA AGAATGGTCA TGAGCCTATT GTTTTTCAGA GAATTGGTGA GATACTCCAT     2640

ACTGCTGATA AGAGGGAAAC GGATTTTAAA CGGCAATTGC AATTAAGATT CACTTCTTTT     2700

GGTCATTTGG AAATTGAAAA GACCAAAGCA AGTAATTTTA TACAGCTTAG TGATTGGATT     2760

GCTACTGACT CAGTGAGGAA TCAGATGATT CTCAAGGATA TTCTAGCCCA AGTGGCAGAA     2820

GGACGGAATA TCTTGGTTTT AGTTAATCGA ATTCAACAGA TAGATGTCTT TGAAAAATTA     2880

TTGAAAGAGA AAGAGGTTGA TGACTGTTAC ATTATTAGCG GAAAAACCAA AGTCCGAGAG     2940

AGAACGAGTT TACTGGAGAC GTTAGAACAG TTAGATAAAG GGTTTGTTTT GTTGTCTACT     3000

GGAAAAATACA TTGGCGAAGG TTTTGACTTA CCTCAGTTGG ACACGCTTAT CTTGGCAGCA     3060
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1107

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CCCTTTTCTT GGAAAAATAA TTTGATTCAG TATGCAGGTC GGATTCATAG AAACTACAAG      3120

GATAAGTCTT TGGTGCGTAT TTTCGATTAT GTGGATATTC ATGTTCCTTA TTTAGAAAAG      3180

ATGTTTCAGA AACGACAAGT AGCTTATCGA AAGATGGATT ATCGTGTCAT CGAGGGTGAG      3240

GAGAAACAAT TCGTTTATGT TGATAGTAGA TATGAGAAGG TGTTGAGAGA GGACTTAGCA      3300

GGGGAAAGAC AGGAATGTCT GCTTATTTTA CCTTATGTGC ACCAGACAAA ACTGATGAAT      3360

TTTCTAAAAG AATTTAGGAT TAGTCAAATT GAGATATGTA TACCAGAGAC GGTTGCAAAT      3420

AAAGCATGGC TAGACCAGTT GAAGAGCCAG AAAATTAAAG TGTCTTTTAC TCAATCAAAA      3480

ATAGTAACGC CTATTCTTTT GGTGAATAAG ACTATTGTTT GGTATGGTGC AATGCCATTA      3540

TTAGGGAAGG TAGATGAGAT GACCATATTA CGTTTGGAAT CAGCTAGTAT AGTTTCTGAA      3600

CTAGTGGCAG GTTTACGATA GAGAAAATTT TTAAAAATTT CTATGTATGA TTTTCATTTC      3660

TTTAGTGAGA CTGTTGCCAT TATCACATTC GAATCACACA AAATAAAAAA ATTTTTATAA      3720

GTACTTGACA AATAGATTGA AATATCATAA AATAAAAACG GTTACAGAGT TATTAATTAT      3780

TTAAGCTTCA TGTCACCATT AAAAATTGAA ATAAAAGGAT GTTATCACTA ATACAAGTGA      3840

GCAGGAACCT ATTTAATCAC ATCAGAAGAA GTTTCTTGAT GTTTTTAAGT AGGTTCCTTT      3900

TATTTTAAAA GGGAAATTTT ATGATCATAA AACGAATACT AAACCACAAT GCCGTAATTG      3960

CGCAAAGTAA AAAAGATATC GATATTCTTC TTTTTGGAAG GGGAATAGCT TTTGGAAGAA      4020

AAACTGGAGA TAAAGTAAAT CCAATTGATA TTGAGAAAG TTTTTTTCTC AAAAATAGAG      4080

ATAATATGAC CCGTTTTACA GAGATGTTTA TTAACGTTCC TTTGGAGTTG GTGTACATCA      4140

CCGAAAAAAT AATTAACCTA GGTAAAATAA CATTGGGTAA TAATTTTGAT GAAATTATCT      4200

ATATTAATTT AACGGATCAT ATTTCTTCGA GCATAGAACG TTATAAAGAA GGGATTATTA      4260

TTTCGAATCC CCTACGCTGG GAAATATCGA AATATTATAA AGAAGAATTT GAACTTGGGA      4320

AAAGGGCTTT ACAAATAATA AAAAAAGAGT TAGGTATTGA ACTTCCAATT GACGAAGCTG      4380

CATTCATAGC GCTACATTTT GTTAATGCTA ATTTAGAAAA TAATTTTCAA GAGTCGTATA      4440

AAATCACTGA AATAATTATG GGAATTGAGA AAATCATTCA AGATTTCTAT TGTACTGAGT      4500

TTAACCAAGA TTCTATTGAT TATTATAGAT TCATAACTCA TATGAAATTA TTTGCCCATC      4560

GCTTGGTTGA GAATACAACT TATTGTGACG ATGATGA                             4597
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(2) INFORMATION FOR SEQ ID NO: 176:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3984 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double

1108
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 176:

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CGGCTTATTT ACTACTTGTT CCATCATATA TGGAATATGC ATGAAACCTG CTCTCATATT        60

AGGGAATTTT TTATCCACTA AATAAAGAGC TTGGTACATC AAATGATTGC AAACAAAGGT       120

TCCTGCACTA TTGGATACAA CTGCCGGAAG TCCCTGTTTT TTGATAGCTT GTACCATCGC       180

TTTGATAGGT AAACTACTAA AATAGGCCGA TGCTCCATCA ATACGAATCG GTGTATCAAT       240

TGGTTGATTG CCTTCGTTAT CAGGTATGCG AGCATCATCT TGATTAATAG CCACTCGTTC       300

AGGTGTTAAG CCGGTCCTGC CGCCTGCTTG TCCAATACAA AGTACAGCAT CTGGTTGATA       360

TCGTAATATT TCTGCCTCTA AAACTTCTGA CGACTTATAA AAAACCGTTG GAATTTCTAC       420

CCAGCGAACT TCAGCCCCAT TAATCTCAGA TGGTAATAAT TTTACAGCCT CCAAAGCTGG       480

ATTAATCTTT TCACCTCCAA AAGGATTAAA ACCTGTAACC AATATTTTCA TTTTATTTTC       540

CTTTACTAAA ATGCGAGAAA GTACATTAAG AATATGTGAA TAACAATCAT TACTAGAGCA       600

ACACCTGCTT GAGCCTTTAT AACGCCATTC TGATCTTTCA TATCCATCAA TGCTGCTGGT       660

AGAGCGTTAA AATTAGCAGC CATTGGGGTC AATAAGGTCC CACAATAACC TGCTGTCATG       720

GCAAGAGCAC CAGCCACAAT TGGATTAGCT CCCAGAGCAA ATACAAAGGG AACTCCAACA       780

CCTGCTGTAA TAACGGTGAA TGCTGCAAAA GCATTTCCCA TAATCATTGT GAATAGAACC       840

ATTCCAAGAA CATAGGCCAA AACTCCTATA AAGCGACTAT CTGAAGGAAC AATACCGCTA       900

ATCAGATGAG AGATAACATC ACCAACACCT GCTACAGTAA AAATAGCCCC CAAAGCCCCT       960

AATAATTGAG GAACAATCCC ACTTGTTGAA ACTTGCTGAG TCATTCGATT ATTTTCTGAT      1020

AACAGACTCT TAGGGTGACT ATTGGTAATC ACAAGAACAG AAATTGTAGC AAACAAGGCG      1080

GCAAGGCTAA TCGAAATCTT GCTAAATTCT GGAATCATTT GCGCTAAGAC CAACGCAAGT      1140

ATTGCCATCA GCATAACTGG AATAAAAATT TTATTTTTCA ACCTGTTAGA TTCAATATTG      1200

GCTTTCATTT CATCTAAGGA TGGCAAGGTT CCGATACGGA CTTGCTTAAA CAATGTTAAC      1260

AGCGATAATA GGATTACAAT AATACCAATA CTCATATTTG GCATATAGGA ACCACCTATA      1320

AACGTAATAG ACAATAGAGT CCAAAATGCA GATGTCCCAA GTCGAACTGG GTTTGTTTTA      1380

TCTTTATAAC TACAATAGGC TGTATGGAGA AATTGACAAC CAATCACAAT ATAGGTCAAC      1440

TCTAATAGTT GCTTTGCCAA CTCTGTCATT TTTGTTCTCC TCCCCTAGTC TTTTTTGATA      1500

TCAATTTTTT ATCAAATAAA TAATTATAAA TCCCCACTAC AATAAGTGTT ATAACAGCAA      1560

CAATAATAGA TGTAGAAGCA ATCCCTGCAT AATTGCTTTC ATAGCCTAAC TGATCTAATG      1620
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1109

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TTCCCCCTAT CAAGAGGACT CCCCCAGCAC CTACAAACGT ATTTTGAGCA AAGAAATTTC      1680

CAAAATTTTC ATTCGCAGCC GCACGCGCTT TTATTGTCTC ATCTTCAACC TCTGTTAACT      1740

TTCTACCTAA TTGAGACTCT GCAGCTGCTT CTCCCATAGG TTGAACCAAA GGTCTGACAA      1800

ACTGAGGGTG TCCTCCTAGA CGAATTGAAA AGAAACCAGC TAACTCTCGA ATAAAGAAAT      1860

AAACTGTATA GAAGTTTCCA ACTGTCAGAC CTTTAATCTT TCGAATCAAA TCGATTGATC      1920

GTTGCTTGAG TCCAAAGGTT TCTGACAGCC CCACAAGAGG CAAGGTAACC ATAAAAATCG      1980

TGAGCACTCG CTGATTGCTA AATTCTTTTC CCAAAATCTC CAAAAATTCA ACGAGAGAAA      2040

CACCTGAAAC TAAAGCTGTA ACCAAACCAG CTAAGACTAC TGTTGCAATT GTATCAAATT      2100

TTAAAATAAA ACCCACAACA ATGATTGCTA TTCCTATTAA TCTAATCCAC TCCATATCAA      2160

ACTCCTTTAT ATTCAAAATG ACAGTATTTT TAAAATTTTA TCAAGATCAA TACCATTCCT      2220

TATTTAATGT GTTTTTCTAG TTCTTTTTGG TATTTGCTAT TGGATTCCAA TTTTTCTTTT      2280

TGCCATTTTT TAAAAACCTC GTTATATTCT TTTGTTGTAA CAATATCTTT TTGCAATTTC      2340

ATTCCTTTAA AGATATATGG ATCCCCCTTA ATACCAACTT GTGAGTATGG TTTTGAGAAT      2400

GGTACTACGT TACTTACAAC TGGAGAACCA CCAGATGAAG CTGTTGGCAT CAATAATGAA      2460

CTATCTGTCG ACCAAGCTTG AGCTTTGGCA TATTTTTCAT ATCTTTTCTC TAGGTCAGTG      2520

GTCTCAGAAA CAGCATCTTC TAACAATTTC TTATATTTAT CCAAACCAGG TTTAGCTACA      2580

ACATCCTTAT CTTTTCCTTT CGTAATACCA AGGTGTTTCA TGGCAGAACC AGATTTTGGA      2640

TCTATAATAT TCAAGTGAGA CGCTGGATCT TGATAGCTTG GAGCCCATCC TGTACTGTTC      2700

AAATCATAGT CTTTTTGAGA AGGAGCAACA TTGCCGTATT TATCATTTTC CATCAAACCA      2760

TCAATAACAT TTCCAATAAC GTCTGTCCTC GATGTTCGAG TCGCTATACT GTAGCCCAAT      2820

GATGCTGGAT CTACTGCATA GACATAAGAA AATGTTGTCG GTGCATCTGC TTCTTTATCA      2880

GTTTTTCCAC AAGCCACTAA AATAGCTGAC GTGCTCAGGA CCACTCCTGC TGTTAAGAGC      2940

CACTTTTTCT ATTTCATAAA GAATCTCCTT TGGTTTATTT TAATCTACTT TTACAATCCA      3000

ACCTTCTGGC GCTTCAATAT CGCCAAACTG AATACCCGTC AATTCATTAT ATAATTTACG      3060

CGTCACAGGA CCTACTTCTG TTTCACTATA GAATACATGG AAATCATCAC CATGTTGAAT      3120

ACCTCCAATT GGAGAAATAA CCGCTGCTGT ACCACAGGCA CCTGCCTCTA CAAAACGGTC      3180

AAGATTATCA ATTGGAACAT CACCCTCAAT AGGAGTTAAT CCCAAGCGAT GTTCTGCCAA      3240

ATAAAGCAAG GAATACTTGG TAATAGATGG CAAGATAGAT GGACTCAATG GTGTTACAAA      3300

TTCATTATCA GCTGTAATTC CAAAGAAGTT AGCTGATCCG ACTTCTTCAA TCTTTGTATG      3360
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1110

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AGTTGATGGG TCCAGATAGA TAACATCTGA GAAATGACGT GACTTGGCCA TTTTTCCTGG        3420

TAAGAGACTT GCAGCATAGT TTCCACCAAC CTTAGCCGCA CCTGTACCAT TTGGTGCTGC        3480

ACGGTCGTAC TCATCCTGAA TCAAGAAGTT GGTTGGGACC AAACCACCTT TAAAGTAATT        3540

TCCAACTGGC ATAGCAAAGA TGGTGAAAAT GTACTCTTCT GCCGGTTTTA CCCCGATAAT        3600

ATCTCCGACA CCAATCAAAA GAGGGCGAAG ATATAAGGTT CCACCTGTTC CGTATGGTGG        3660

TACGTATTCT TCATTCGCAC GGACAACTGC TTTACAAGCT TCTACAAACA TGTCTGTCGG        3720

AACTTGTGGC ATCAAGAGAC GGTCACATGT ACGTTGCAGA CGTTTAGCAT TTTCATCAGG        3780

ACGGAACAGT TGAACACTGC CATCCTTAGT ACGATAAGCT TTCAAACCTT CAAATGCTTG        3840

TTGTCCATAG TGAAGACTTG GAGAAGACTC TGAAATATGC AAAGTTGCAT CCTCTGTAAG        3900

CTCTCCTTGA TCCCATTGTC CATTTTTGAA ATGAGCAAGA TAGCGATAAG GTAATTTCAT        3960

ATAGGAAAAA CCGAGGTTTT CCGG                                               3984
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(2) INFORMATION FOR SEQ ID NO: 177:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 8703 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 177:

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TATCTAATTA TTGGTTTTTA TCGCTGACCT TGGCTATTGT TGGGGTTGTT TTACCCTTGT          60

TGCCTACAAC ACCTTTCCTT TTGTTGTCTA TTGCTTGTTT CTCCAGAAGT TCCAAGCGAT         120

TCGAAGATTG GCTTTATCAT ACCAAGCTCT ATCAAGCATA TGTAGCTGAT TTTCGTGAGA         180

CCAAGTCTAT TGCGCGTGAA CGAAAGAAAA AAATCATCGT CTCTATCTAC GTCTTGATGG         240

GAATTTCTAT TTATTTTGCA CCTCTTTTAC CAGTCAAAAT CGGTCTGGGT GCTTTGACCA         300

TCTTTATTAC TTATTATCTC TTCAAGGTCA TTCCAGACAA AGAATAGTTA AAACAGTAGT         360

TATTTGCCTT GATAAAATTG AAAGCATATT CATAACAATA TGATATAATA AAATTGAAGT         420

AATATTCAAG GAGAATCAAA TGATTTACGA ATTTTGTGCT GAAAATGTGA CTTTACTTGA         480

AAAAGCGATG CAGGCTGGAG CTCGTCGGAT TGAACTCTGT GATAATCTAG CAGTTGGTGG         540

GACAACACCC AGCTATGGAG TGACTAAGGC AGCGGTTGAA CTGGCAGCTA ACTACGATAC         600

AACCATCATG ACCATGATTC GGCCACGTGG TGGTGACTTT GTCTATAATG ACCTAGAAAT         660

TGCTATCATG CTAGAAGACA TTCGTTTGAC TGCTCAGGCT GGAAGTCAAG GGGTTGTATT         720

TGGAGCTTTA ACTGCTGATA AAAAGTTGGA TAAGCCTAAT CTGGAAAAGT TAATTGCTGC         780
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ATCAAAAGGA ATGGAAATTG TCTTTCACAT GGCCTTTGAT GAACTAAGTG ATGAAGATCA        840

AGCGGAAGCT ATTGACTGGC TCAGTCAAGC CGGTGTCACT CGTATCCTAA CTCGTGCTGG        900

TGTGTCTGGC GACTCCTTAG AAAAACGTTT TGTTCACTAT CACAGAATTT TGGAGTACGC        960

TAAAGGTAAA ATTGAAATTC TACCAGGTGG GGGGATTGAC CTTGAAAACC GTCAAACCTT ,     1020

TATCGACCAG GTGGGGGTAA CACAATTGCA TGGTACTAAG GTTGTTTTTT AAAAAATAGA      1080

AAGGAACTGC TAGCTTTGGG TAGCAGTTTT CACTTATGTT TGAAATTTTT AAATCCTATC      1140

AATTTAATCA AGAAAAGGCT CATGATTATG GTTTTATAGA AAATAGCGAA GTCTGGACAT      1200

ATAGTTGCCA GATTTTGCAA GGTGACTTTG TCATGACTGT GTCCATCACT GCTGATAATG      1260

TGAACTTTCA AGTCTTTGAC CAAGAGACTG GTGACCTCTA TCCTCACGTT TATATGGAAA      1320

GCATGAGGGG AAGTTTTGTC GGAAATGTCC GTGAGGCTTG TCTGGAGATT CTTTACCAGA      1380

TTCGGAAGGC TTGTTTTGAT GTGCAAGATT TTATCTGTCA TCAGACTAAG CGTATCATGA      1440

CTCAAGTTCA GGAAAAGTAT GGAAACCAGT TGGAGTATCT GTGGGAAAAA TCGCCTGATA      1500

CAGCTGTATT GCGCCATGAA GGCAATCAAA AGTGGTATGC CGTCTTGATG AAAATCTCTT      1560

GGAATAAGCT GGAAAAGGGC AGAGAAGGAC AAGTGGAAGC AGTCAACCTC AAGCATGACC      1620

AAGTAGCTAA TTTGCTTTCA CAAAAGGGGA TTTATCCAGC CTTCCATATG AGCAAGCGCT      1680

ACTGGATTAG TGTGTCCCTT GATGATACTT TATCAGATGA AGAAGTACTG GAATTGATAG      1740

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AATTAGCTAA ATATTCTTTA CTGAAGAGAT TTTTAGAAAA TATAGGATTT ACCACACTAG      1860

AGGAATATGG TGCCATCTTC AAATACCTGA TTGAGAATGT CAAGACGGAT CGTCAGATCA      1920

TCTATTCGCC TCACTGTCAT GATGACCTCG GAATGGCAGT GGCAAATAGC CTTGCTGCTG      1980

TCAAGAATGG TGCAGGACGT GTTGAAGGGA CTATCAATGG TATTAGGGAG CGAGCTGAAA      2040

ATGCTGCTTT GGAAGAAATT GCAGTGGCTC TCAATATTCG CCAAGATTAC TACCAAGTAG      2100

AAACCAGTAT TGTCCTAAAT GAGACCATCA ATACGTCAGA AATGGTTTCT CGCTTCTCTG      2160

GTATTCCAGT TCCTAAAAAC AAAGCCGTCG TTGGTGGCAA TACCTTCTCC CACGAATCTG      2220

GTATTCACCA AGATGGAGTC CTTAAAAATC CTCTCACTTA TGAGATCATC ACACCTGAAT      2280

TGGTTGGTGT TAAGATTCTG CTTGGAAAAT TATCTGGTCG CCATGCTTTT GTTGAGAAAC      2340

TGAGAGAATT GGCCCTAGAT TTTACAGAAG AGGATATCAA ACCACTCTTT GCTAAGTTCA      2400

AGGCACTGGT CGATAAGAAG CAAGAAATCA CAGATGCAGA TATTCGAGCT TTGGTAGCTG      2460

GAACCATGGT TGAAAATCCA GAAGGCTTCC ACTTTGATGA TTTACAACTT CAAACTCATG      2520
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1112

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CAGATAATGA CATTGAAGCG CTCGTTAGCC TAGCCAATAT GGATGGTGAG AAAGTCGAAT    2580

TTAATGCGAC AGGGCAAGGT TCCGTTGAAG CAATCTTTAA TGCTATCGAT AAGTTCTTTA    2640

ACCAATCTGT TCGTTTGGTG TCCTACACTA TCGATGCGGT AACAGATGGA ATCGATACCC    2700

AGGATCGGGT TTTGGTCACT GTTGAAAACA GAGATACAGA AACCATCTTT AATGCAGCAG    2760

GGCTTGATTT TGATGTGTTG AAGGCTTCTG CTATTGTCTA TATAAACGCT AATACCTTTG    2820

TTCAAAAAGA GAATGCAGGT GAGATGGGAC GCAGTGTTTC TTACCACGAT ATGCCTAGTG    2880

TGTAAAGGAG AAGGCTATGG CAAAGAAAAT AGTAGCTCTA GCAGGAGACG GAATTGGCCC    2940

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ACCTGATGAA ACCCTTAAGG CAAGTAGGGA AGCAGATGCT ATCCTACTAG TAGCTATCGG    3120

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GGAACTCAAT CTTTACGCTA ATATTCGTCC TGTAAAAATC TTTGACAGTC TCAAGCATTT    3240

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CAGAAAAATC GTTACTAGTA TCGATAAGCA AAATGTTCTA GCGACCTCAA AACTCTGGCG    3480

GAAAGTAGCT GAGGAAGTCG CACACCATTT CCCAGATGTA ACCTTGGAAC ATCAGCTGGT    3540

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ATAGTTTGGT TTCTTGGGAT GGTGACCACA CTAGTAGCCT TATATTTTAT TTGGAGGTAA    4200

TGGATGGCAG GGTCTTCGAG GGAATACGCT GCTTGGGCTC TAGCGGACTA TGGTTTTAAG    4260

GTCGTGATTG CAGGATCTTT CGGTGACATT CATTACAATA ATGAACTCAA TAATGGCATG    4320
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1113

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TTGCCAATCG TTCAGCCTAG AGAGGTTAGA GAGAAACTAG CCCAGCTAAA ACCAACCGAC      4380

CAGGTAACTG TGGACTTGGA ACAACAAAAA ATCATCTCAC CAGTTGAAGA ATTCACCTTC      4440

GAGATAGATA GCGAGTGGAA ACATAAACTC CTAAATAGTT TGGATGATAT CGGTATTACC      4500

TTGCAGTATG AAGAGTTGAT TGCTGCTTAT GAAAAACAAC GACCAGCCTA CTGGCAGGAT      4560

TAGAAAAAAT AGAAAAGGAG ATATAGTAAA CTGAAATAAG ATGTAAACAA ATGAATTGGA      4620

GCTTAACATC CATTTCCAGC AATTTTTTAG AAACTACAGT GGACTATTCT GGATTCAACA      4680

CATTATAAAA TTATGACAAA ACACATTCAC AAGAAGGCTA CGACATTTTA AAAGGTGAGG      4740

GCGGATGTAT CGTTTGCCCT ACTAAAGTTG GTTACATTAT CATGACCAGT GACAAGGCAG      4800

GACTTGAGCG TAAGTTCGCA GCCAAAGAAC GTAAGCGTAA CAAACCAGGT GTTGTTCTCT      4860

GCGGTAGCAT GGATGAACTT TGCGCTTTAG CGCAACTCAA CCCAGAAATT GAAGCATTCT      4920

ACTAAAAACA TTGGGATGAA GATATTCTTC TTGGTTGTAT CCTTCCTTGG AAACCAGAAG      4980

CCTTTGAAAA ACTCAAAGCA TACGGGGATG GCCGTGAAGA ACTTATTACT GATGTACGTG      5040

GTACTAGCTG TTTTGTTATC AAGTTTGGAA AAGCAGGTGA ACAATTGGCT GCCAAGCTTT      5100

GGGAAGAAGG TAAAATGGTC TACGCCTCAT CTGCTTCAAT GACAAAACGA TTGAAACTCG      5160

CTATGAGCAA GGTGTAATGG TGTCTATGGT CGATAAGGAC GGCAAACTCA TCCCAGAACA      5220

AGGAGGAGCA CGTTCAACTT CACCAGCTCC AGTTGTGATC CGTAAAGGGC TTGACATTGA      5280

TAAAAATCATG ATGCACCTGT CAGATACTTT TAACTCATGG GACTACCGTC AGGTTGAGTA      5340

TTATTAGGAT AGAGAAGAAG TCTAGTGTTA TGAGATATTA AAGCTCCTAA CACTGGGCTT      5400

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TAATAAGTAA TGCCAATATT TAAACATCAT TAGTAAAAGG AGTTAGATTG ATGAATAAAA      5520

GAAAAGTTAG TTTAGAAGAT TTTTATAAAT GGTATAGTCT AAATAAAGAA GAGTTATTAA      5580

ATAAGGCAAC TGTTGGTGAA AAGTTTAATG ATAAATTAAA AGAAGAGTTT CTCCAGGAAT      5640

GGCCTTTGGA TAGGATTTTA ACAATGTCAA TCGATGAATA TGTAATAGGA AAGGGACAGC      5700

AAAATAAGTC TTTATGCTAC GCTCTTGAGA AGGGAAAATA CAAAAATCTA TTTCTTGGAA      5760

TTTCTGGTGG CTCAGCTTCA AAATTTGGTA TTTATTGGAA TAAAAAAACA AACAAATATA      5820

AAGATCAAGC TAATAATGAG ATTTCAGAGT TGGATCAGCG ATTTTCAAAA TTAAAATCAG      5880

ATTTGTATGA AATTATCAAA GAAGGTATTC GTTTTAACTT TGAAAATCCT ATTTTTGATA      5940

TGAAAAGATC AACAAATGAA TTTATTGGTC GTTCTGCTAT GGTGACAAAA TTACTTTGTA      6000

TCTATACTGA GGGAGATCCT TTCTTTGGTG TAAATATTAA TAGTCAGAAA GAATTTTGGA      6060
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1114

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ACCACTTTGT TTCTCAGACA AATCAAGGTG GACCTTATCT GCAAAATCAT AAAATAATTG      6120

AACTGGTGTC CAAAACTTAT CCTGAGTTGG AGCCATCGAA ATTAGGAACT ATGCTTTTTG      6180

AGTATTCTAA GCTTTTTATG GAAAATAAGG AAGACAATAG TACAATGGAT TCATCAAACA      6240

ATTTTCGTCA TCAATTAACT CAATCTCTAT TAAAGTCTCC AAACCTCATC CTCCGCGGTG      6300

CTCCTGGCAC GGGAAAAACT TATCTTGCTA AAGAAATTGC TAAAGAATTA ACGGATGGCA      6360

ACGAAGATCA AATCGGATTT GTACAATTTC ACCCATCATA TGATTATACG GATTTTGTAG      6420

AAGGTTTAAG ACCAGTATCA AATGGGGATG GAGCTATTGA GTTTAGGCTA CAGGACGGTA      6480

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GTGGTGTTCC AGGATGGTCA CTACCTAGCA AATATGTTTA CGAGTTGTAT AAAGATAAAA      6720

ATTATAATAA GCAAGAATAC TACAAAAGTG GTGGAAAAAC TGTCCTAGAA ACATTGAGAA      6780

AGAGATTTGG TTTGAAAGAC TATGTTTCCC CAACAGAAAT TGATACTGAT AAGAATTTTG      6840

TCTTCATCAT CGATGAGATC AATCGTGGGG AGATTTCTAA GATTTTTGGC GAACTCTTTT      6900

TCTCTATCGA CCCCGGCTAT CGTGGTGAAA AAGGAAGTGT TTCTACCCAA TATGCAAATC      6960

TACACGAAAC TGATGAAAAG TTCTATATCC CCGAAAATGT TTACATCATC GGAACTATGA      7020

ATGATATTGA TCGTTCAGTG CATACCTTTG ATTTTGCTAT GCGTCGTCGT TTTCGTTTTG      7080

TTGAAGTTAC TGTCGAGGGT CAAGCTGGCA TGTTGGATAA AGAGTTGAAT ATCCATGCAG      7140

AAGAAGCAAA AATTCGTCTA AGAAACTTGA ACGCTGCTAT CGAAAATATT CAGGAATTAA      7200

ACAGTCATTA TCATATTGGA CCAAGTTATT TTCTTAAGTT GAAGGATGTA GATTTTGACT      7260

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CCTCTTTTAG ACAGAACCTT GGAAAGTCTA TCCCAAGATG AACGTATTTT CATTTTTCCA      7560

AATGATTwGA CTCATACTCC TGATTTGGAT AAGGACCAAA AGATTTTTGA AACAGTCAAT      7620

CAGAAAATCA AGACAGGGAA CGTGATTGGT TTTCTTGGAT ATGGTCAGGA AAGATTAACG      7680

ATTTCCTCAC GATTTTCTGA TGAGAGTAAT GACCACTTTT TGCATTATCT CTTAAACAAG      7740

GTTCTTCATA TCAATCTCAC TAGTTTAGAT GTTGCTTTGT CTCGTGAAGA GAGGCTTTAT      7800

CAACTTTTGG TGTATCTCTT TCCCAAGTAT CTACAAGCTG CTATTCGAAA AGGTCTTTAT      7860
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1115

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AAGGAATATC ATCGATTTTC TCATAACGAC AGTCATGTTA AGGGAGTGAT TGATGTAAGA          7920

AACCATCTCA AGAAAAATCT TCCTTTCACG GGAAATATTG CCTACGCAAC GAGAGAGTTC          7980

ACCTATGATA ATCCCCTCAT GCAGTTGGTC CGTCACACTA TTGAATACAT TAAGAATCAG          8040

AAAAGCATTG GTCAAGGGGT ACTAGATAAT CTCTCAACTA GTCGTGAAAA CGTATCTGAA          8100

ATCGTGCGTG TAACGCCCTC TTATAAACTA GCTGATCGTG CTAAGATTAT TCGGGGAAAT          8160

CAATCTAAAC CTATACGTCA TGCATACTTT CACGAGTACA GAAACTTACA AGAACTTTGT          8220

CTGATGATCC TAAACCAAGA AAAGCACGGT TTAGGGTATC AAGATCAAAA AATCTATGGT          8280

ATTCTCTTTG ATGTTGCCTG GCTTTGGGAA GAGTATGTTT ACACCTTGTT GCCAAAAGGT          8340

TTTGTACATC CCAGAAATAA GGATAAGACG GATGGAATTT CAGTATTTTC TGTTGGGAAA          8400

CGAAAAGTAT ATCCAGATTT TTATGACAGA GAACGAAAGA TTGTTCTAGA TGCAAAATAT          8460

AAAAAACTGG AATTGACTGA AAAAGGAATC AACCGTGAGG ACTTATTCCA GCTGATTTCC          8520

TATTCTTATA TTTTAAAAGC TGAGAAGGCT GGACTGATTT TTCCTAGTAT GGAGCAGTCA          8580

GTAAATAGTG AAATAGGAAA AGTAGCTGGC TATGGAGCTC AATTGAAGAA GTGGTCTATT          8640

CGAATCCCTC AGAATGCCTC ATTCTATAGT ACATTTTGTA AAATGATGGA AAATTCAGAA          8700

GAG                                                                       8703
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(2) INFORMATION FOR SEQ ID NO: 178:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 4854 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 178:

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CATCACCAGT TTTAGATGGC TTTAACAGTG AAATTATTGC TTTTAATCTT TCTTGTTCGC          60

CTAATTTAGA ACAAGTACAA ACAATGTTGG AACAGGCATT CAAAGAGAAG CACTACGAGA          120

ATACGATTCT CCATAGTGAC CAAGGCTGGC AATATCAACA CGATTCTTAT CATCGGTTCC          180

TAGAGAGTAA GGGAATTCAA GCATCCATGT CACGTAAGGG CAACAGCCAA GACAACGGTA          240

GGATGGAATC TTTCTTTGGC ATTTTAAAAT CCGAAATGTT TTATGGCTAT GAGAAAACAT          300

TTAAATCACT TAACCAATTG GAACAAGCCA TTATAGACTA TATTGATTAT TACAACAATA          360

AGAAAATTAA GATAAAACTA AAAGGACTTA GTCCTGTGCA GTACAGAACT AAATCCTTTG          420

GATAAATTAT TTGTCTAACT GTTTGGGGGC AGTACACAAG AAAGCGCTTT AAAACCAGTA          480
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1116

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GACCTTTTCA TAAGGTTCGC TTGATGTACC AAGATGAGGC TGGTTTCGGT AGAATCAGTA      540

AACTGGGATC TTGTTGGTCT CCAATAGGAG TAGGTCCACA TGTCCATAGT CACTATATAC      600

GAGAATTTCG CTATTGTTAT GGAGCTGTTG ATGCCCATAC AGGCGAATCA TTTTTCTTAA      660

TAGCTGGTGG ATGTAATACT GAGTGGATGA ACGCCTTTTT AGAAGAGCTT TCACAAGCTT      720

ATCCAGATGA TTATCTTTTA CTCGTTATGG ACAATGCTAT ATGGCATAAA TCAAGTACCT      780

TAAAGATTCC GACTAATATT GGTTTTACCT TTATTCCTCC ATACACACCA GAGATGAACC      840

CATTGAACAA GTGTGGAAAG AGATTCGTAA ACGTGGATTT AAGAATAAAG CCTTTCGAAC      900

TTTGGAAGAT GTCATGAATC AACTCCAAGA TGTCATACAA GGATTGGAGA AGGAGGTGAT      960

AAAGTCCATC GTTAATCGGA GATGGACTAG AATGCTTTTT GAAAACAGAT GAGTATAAAA     1020

TTGAATTGCT TATAAAAAAG CTCCATACAC TGGATGTGTA TAGAGCAATG GGGCTTTATT     1080

TGATATAGAG TTCTTGGTTT TTTAGGACAA TTTCTCGGAT ACTTGCAAAC TTTTTAAGTT     1140

TTTTGATTTC TTCTGGATGA GTGACGAGAG TGATAACATA ACCTTCCTTG CCCATACGAC     1200

CAGTACGGCC AGCACGGTGT GTGTAGGTTT CGCTATCTCT AGGAATATCA AAGTTTACGA     1260

CACATTCTAG GCTATCGATA TCAATTCCAC GAGCCAAAAG GTCAGTTGCA AGAAGCAGGG     1320

TTAGTTGGTT ATCTTTAAAC TTTTCTAAGA TGATTTTTCT AAATTTAACA TTAACATCAC     1380

TAGCGAGGGA AACAGCCAAT ATATCACGAT ACTGTAGTTT TTCCTCGGCA TTCCCAAGGT     1440

CTGACAGGCT ATTGAAGAAG ACTAGACCAC CCAAATCCTC TACATGAGCC AGTTTTCGTA     1500

GCATATCCAC TCGATGACGT TGGTCTACCT GCATGTAGAA ATGCTGGATA TTGTCCAATT     1560

TTTGATCAGA GAGATCAATA GTGCGTGTAT TCGGCACAAT CTTTTCTTGG TCAAACTTGG     1620

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TTCTGCCTCA AATCTAATGC CAGCAGTCTG GCGCATGGTA TATAGTAGCT CATGAACAGA     2220

GCCTGCATCA TACAGCCAAG TTTGGTAGAG ATTCAGATCT GGTTGCTGGA TCATGTGTGC     2280
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1117

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AAATGCAGCG ACTTCCTCAG TCATCGTATG AGGAGCCTGT TGGATAGGAA GCTGGACTTG        2340

ATTTCCTTGG TGGTCGGTAA AAATAGCTGA GCGAATATGC TCAATCGTGT TGAGAGTCAA        2400

GGTTCCATCT GTTGTATAAA TCTCGCAAGG AAGATTGGAA GTGATGTTTT TTCCAGCCTT        2460

GATGTGAACT TGATAGTCTG GGTAGAAGAG GATACCATCT CCATTTAGGT CAATGCTATT        2520

GTCAAGCTGT TGAGCATGGT AAGTCGCGTC ATTGGCTTTT CCAAAAAGAC GAACAGCAGC        2580

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AGACGGGACT ATCCAACAGA GAGGAGAAAA TTTCAAATAA GCTATTAGCT TTCTTTTCCG        3240

AATAAATAGA TAGAAGCATA GAATCTAGCA AACCTAGATT TAAAAATGTG CTATAATAGA        3300

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GAATAAAAGT AGACTAGGAC GTGGCAGACA CGGGAAAACG AGACATGTAT TATTGGCTTT        4020
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1118

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GATTGGTATT TTAGCAATTT CTATTTGCCT ATTAGGCGGA TTTATTGCTT TTAAGATCTA      4080

CCAGCAAAAA AGTTTTGAGC AAAAGATTGA ATCGCTCAAA AAAGAGAAAG ATGATCAATT      4140

GAGTGAGGGA AATCAGAAGG AGCATTTTCG TCAGGGGCAA GCCGAAGTGA TTGCCTATTA      4200

TCCTCTCCAA GGGGAGAAAG TGATTTCCTC TGTTAGGGAG CTGATAAATC AAGATGTTAA      4260

GGACAAGCTA GAAAGTAAGG ACAATCTTGT TTTCTACTAT ACAGAGCAAG AAGAGTCAGG      4320

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GATTGAAGAG ACTGAAAAGA CCAGTCTAGG AAAGGTTCAC TTAACAGAAG ATGGGCAACC      4440

TTTTACACTT GACCAACTGT TTTCAGATGC TAGTAAGGCT AAGGAACAGC TGATAAAAGA      4500

GTTGACCTCC TTCATAGAGG ATAAAAAAAT AGAGCAAGAC CAGAGTGAGC AGATTGTAAA      4560

AAACTTCTCT GACCAAGACT TGTCTGCATG GAATTTTGAT TACAAGGATA GTCAGATTAT      4620

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CTTTGATGTT ATCCAATCTT CGTACTTACT CGAAAAAGAT GCGGCCTTGT ACCAATCTTA      4740

CTTTGATAAG AAACATCAAA AAGTTGTCGC TCTAACCTTT GATGATGGTC CAAATCCAGC      4800

AACGACCCCG CAGGTATTAG AGACCCTAGC TAAATATGAT ATTACAAGCG GGGT            4854
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(2) INFORMATION FOR SEQ ID NO: 179:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2186 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 179:

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TAAACAGGTG TTAGGTGCTC TAAACTATTA AAATTCTAAG GAAATAAGGC TACTTTTTCT        60

GGGTCTTGTT CATAGTAGGT GTGGTTCTTT TTTTCGAGTG TAGCCCATAG CTTTGAGCGC       120

ATAGTGGATG GTAGTTGGAT GACAGCCAAA TTCAGAAGCT ATTTCAGTCA AATAAGCATC       180

TGGATTGTCA GTAAGATAGT TTTTAAGTCT ATCTCTATCA ACTTTTCTTG GTTTTGTTCC       240

TTTTACTTGG TGGTTTAGCT CTCCTGTTTT CTCTTTTAGC TTTAACCAGC CATAAATGGT       300

ATTACGTGAG ATTTGGAAAA CGTGTGATGC TTCTGTTATA CTACCTGTTC GCTCACAATA       360

AGAGAGAACT TTTTTACGAA AATCTATTGA ATATGCCATA AGAAGATTAT ACCACATTGT       420

GTACTATTTT TGGTTCATTT TACTATATTT CTAAACACTT AGAAATAATA AAACAAATTA       480

AATATTATTT CTAAATATTT GAAAATAACA TCTATTTGTA TTATACTATC TTTGAGGTAA       540

CTATTATGAA CTATATCAAA AGACCACATT ATTTAGATTT TTTAAGAAAA CATCGTGACC       600
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1119

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GACCAATCAT CAAAGTTGTG AGTGGAGTTA GACGAGCTGG TAAATCTGTG CTTTTTCAAC        660

TCTATAAAGA GGAGTTACTA GCAACTGGGG TAGACGAGGA TCAGATTATA TTCATCAATT        720

TCGAAGATTT GAGTTACTAT GATCTGCGAC ATTTTCAAAC ATTATTCGCT TATATAAAAG        780

ATCAATTAGT TAGCAAGAAA ACATACTATA TCTTTTTAGA TGAAATTCAA TATGTTGAAA        840

AATTTGAACT GGTAGCAGAT AGTCTATTCA TCTTAGCAAA TGTAGACCTC TATTTGACTG        900

GATCTAACGC CTACTTTATG AGTAGCCAAT TAGCAACAAA CTTGACTGGT CGGTATGTTG        960

AGATAGAGGT TCTTCCTTTG TCATTTGAAG AATATCTATC AGGTCAATCT CTCACAGAGA       1020

ATCTGAATAC AACAGAAATT TTTAACAATT ATCTCTTTAG TGCTTTCCCT TACTTATTGC       1080

AAACATCATC TTACGATGAA AAAATTGACT ATCTCAGAGG AATATATAAC TCCATACTGT       1140

TAAATGATAT TGTCACTAGA TTGGGAAAAC CAAATCCTAC TATTATTGAG CGCATTGTCC       1200

GAACCCTTCT CAGTAGTACA GGTAGCTTAA TATCAACAAA TAAGATTCGC AATACCCTAG       1260

TCAGCCAAAA TGTTTCAATA TCCCATAATA CTTTGGAAAA TTATTTGACA ACTTTGACAG       1320

ATAGTTTACT TTTTTATTCC GTTCCACGTT TTGATGTAAA AGGTAGAGCA TTATTGCAAC       1380

GTTTAGAAAA ATATTATCCC GTTGATTTAG GTTTACGACA TCTCTTATTA CCAGACCAGA       1440

AAGAAGACAT TAGGCATATC TTGGAAAATA TGGTATATTT GGAATTGAGA CGTAGATATT       1500

CACAAGTATA TGTTGGTAAT TTAGATAAGT ATGAGGTTGA TTTTGTTGTT GTAACTGATC       1560

TTGGCCACTA CGCTTATTAT CAGGTCAGTG AAACAACACT TGCTCCAGAA ACACTAGAAA       1620

GAGAACTTAG ACCACTAGAA GCCATTAAAG ATCAATTCCC TAAATATCTA TTAACAATGG       1680

ATACGATTCA GCCAACAGCC AATTACAATG GAATCGAGAA GAAAAGCATT ATAGATTGGT       1740

TACTAGAAAA ATAGATAAAT ATAAATCATA CAGCTAATTA GATTTGCAAC AGTCTGTTAT       1800

CAATGATTCT ACCCAAATCC TAACAAGATA TAGTGAATTT CGAATACGCT ATATAATACG       1860

GACACTTGAA AATAGAAATT GGGGATGAAA GGGGATCTAT AATTTCTGGA AGTACTATCA       1920

AAAATTAATA TCATAGTCTT ATTAGAGAAT AGCATCACCC ACTTTCTCAA ATAAGATTAA       1980

ATTGTAACTG AATTATAATG AAAAAGAGAC TGAGCAATCA GTCTTTAAAA TCAGAAAAGC       2040

GCATAGTATC AGGTATTGAA CAACCTTGAT AATATGCGTT TTATTATGGA AATATTTGCT       2100

TCATTTTCTC CTGAAATAGA GCTTTTGCTA TCCTATTTTT CTCTATTTCT AATGATTTAC       2160

TTCAACTTCT TACCTCTTGG GAAAAA                                           2186
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(2) INFORMATION FOR SEQ ID NO: 180:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3236 base pairs

1120
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 180:

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GTCACACGTT TGACTTCACG TATTTCATAA GTATAAACTT TATTTTTATC GGTTAGATAA       60

ATCTTCATGC CATTTTTAGC ATTATCTAAA GGAGAAAATA ACATTTTATT AGCATTATCA      120

ACACCAAAGA TATGGTGACT AGCTAGACTA TAATTTCCTT CTCCCATTAC TTGCTCGCGT      180

TTCATTGTAC CAGCTCCGTA GAAGAGATTA ACATTATCAA GTCCTTTAAA AATCGGCAAA      240

TTCATTTCCA ATTCAGGAAT TGCAATTCCC CCAATAACTG GTAATTTTTG AGCATCCCAT      300

TGAGAAGTTA GAACAGCTTC CGAAGAGATA GCTTTGACAG AATCAAAGTC AAAATTGCCT      360

TCTGTATCCT GATTTTCTTC TAATTTTTCT TTTGATACCT GGCTAACTTG ATACTTATTG      420

GTATTCCAGA CTATGAAAAT ATTTCGAATT TGAGTATTAA AAATCAAAGC CAGTGACAGT      480

AATATCAGAA ATCCTGCTAG GATATTTGTC AGCAGATTTT TTCGCTTGTT TTTCTTTTTA      540

TTATTTTTTT GAGACATTAT GCTTCACCTT CTGTTTCGTT TTCTGTCCCA ACTTCTTCTT      600

TTTCTGCCAC CGCAACCGTT GTGAAAGTCA CTATCTGAGC ATCTTGATCC AGGCGCATTA      660

CTTTAACTCC CATAGTTGCA CGTCCTGTTT GTGAAATATT GGCAAGATTG GTTCGAATCA      720

TGACACCTCT ATCAGTGATA ATCATCAAAT CCTCATCCCC TTGAACAGTC ATAAGACCGG      780

CCAGCAAGCC ATTTTTTTCG GTAATTTTAG CTGTCTGCAT TCCCTTACCA CCACGACCTT      840

TTGTTGGGTA TTCAGTAGCG ACTGTACGCT TACCATATCC TTTTTCTGTG ATAATAAGAA      900

CCTCATCTTG ATCAGTAATC AAGCTGGCAC CAACAACTGT GTCTCCTTCA CGAAGGTTAA      960

CACCTTTCAC ACCAGTGGCG ATACGGCTCA TACCACGAAC GGCTGATTGA TTAAAGCGAA     1020

CTGCATAACC AAACTTGGTA CCAATGATAA TATCCATATC TCCTTCTGCC AACAAGACAT     1080

TGATTAACTC ATCTTCATCC TTTAAATTCA GCGCTTTGAG ACCATTTTGA CGAATATTGG     1140

CAAACTCCTT AACACTGGTT CTCTTCACAA TACCGTGACG GGTTGTAAAG AAGAGATAAG     1200

CATCATCACT GCGATCAGAC TCAACATTGA TAACCGTCTG AATACTTTCG TCTTCATCCA     1260

ATTTCAAGAG ATTGACTACT GGTAGCCCTT TGGCAGTCCG ACCATACTCA GGAATTTCAT     1320

AACCTTTAAG ACGATAGACA CGTCCCTTGT TTGTGAAGAA GAGCAGATGA TCATGGGTGC     1380

TAGTTGACAC TAACTCACGA ACAAAGTCAT CATCTTTCAC TCCCGTTCCT TGGACACCAC     1440

GACCCCCACG TTTTTGAGCA GTGAACTCGT CCTGATCCAA ACGCTTAATG TAGCCTCTGT     1500

TAGAAAGGGT AATCAAGACA TCCGATTCTT CAATCAAGTC CTCATCCTCG AGACTCAAGA     1560
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1121

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CCTGTCCAAT CATCAACTCT GTACGGCGCT TATCAGAAAA TTTACGTTTA ACTTCATCCA    1620

ATTCGTCTTT GATAATTTGA GAAACACGTT CAGGCTTAGC AAGAATATCT GCTAAATCCG    1680

CAATCAGAGC CAAGAGGTCA TCATACTCAG ATTGAATCTT ATCGCGTTCC AAACCTGTCA    1740

AACGACGAAG ACGCATATCA AGGATAGCTT GACTTTGACG TTCAGAAAGC TTAAACTTGC    1800

TCATCAACTC AGCTTGAGcT TCCGCATcCG tTTCACTAGC ACGGATGATA CGAATCAyTC    1860

GTCGATATGG TCTAGCGCAA TCAAGAGACC TTCTAAGATA TGAGCGCGCG CTTCCGCTTT    1920

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CAAAATCTGA CGAAGAGACA AAATTTTCGG TATACCATTT TGGATAGCGA GCATATTGAA    2040

ACCAAAATTG GTTTGCATTT GGGTCATTTT GAAGAGGTTA TTGAGAATAA CATTGGCTGA    2100

GGCGTCGCGC TTGACTTCAA TAACAAATCG AACACCTTCA CGGTTTGACT CATCACGTAC    2160

TGCTGTGATA CCCTCAATGC GTTTTTCCTG AACCAAGCGA ACAATATGCT CATGCACCTT    2220

GGTTTTATTG ACCATGTAAG GAAATTCTGT TACAACGATA CGCTCACGAC CAGTCTTAGT    2280

CGTTTCAATC TCTGTACGAG AACGTAGGAC AATCGAACCT TTACCTGTTT CATAAGCCTT    2340

ATGGATACCT GATTTCCCCA TGACAAGAGC ACCAGTTGGA AAATCTGGTC CAGGCAAGAC    2400

TTCCATCAAG TCCTTGGTAG TCACTTCAGG ATTATCCATG ACCAACTTCA CTGCATCAAT    2460

gGTTTCACCC AGATTATGAG GTGGAATATT GGTTGCCATC CCAACCGCGA TACCAGTTGC    2520

TCCATTAACC AAAAGGTTTG GAAAACGCGC TGGCAAGACC AAGGGTTCCC GTTCATTGGC    2580

ATCATAGTTA TCAACGAAAT CAACTGTATT TTTGTTGATA TCACGAAGCA TTTCCAGAGC    2640

AATCTTGCTC ATACGTGCCT CGGTATAACG TTGAGCGGCA GCACTATCTC CATCCATGGA    2700

ACCAAAATTC CCATGACCAT CTACAAGCAT GTAACGGTAG CTCCACCATT GAGCCATACG    2760

GACCATGGCT TCATAAATAG AGGAATCCCC GTGTGGGTGA TATTTACCCA TGACATCCCC    2820

TGTAATACGA GCAGATTTTT TATGGGGTTT GTCTGGGGTC ACACCCAATT CATTCATTCC    2880

GTAGAGAATG CGACGGTGAA CAGGTTTTAA GCCATCTCGA ACATCAGGAA GAGCTCGCGC    2940

TACGATAACA CTCATGGCGT AGTCGATAAA ACTTGCCTTC ATCTCCTTTG TCAGATTGAC    3000

ATTCACTAAA TTTTTATCCT GCATTAATAA ATGCCTCATT TCACAATTAG TAAGTAACAA    3060

CATTATACCA TAAATTCCCA TCTATTTCAG CCTCTAAACC ACTAAAACGT TTACATCGAG    3120

AACTATAAGG CATATTCGTG ACAAAGTTTT TTAAAAGTGA TAGAATGAAG TTGTCTAGGG    3180

AAAACCCCTA ATAGAATAAG GAGATGGTTA nACAATGACT CTGACTAACA CACAAA       3236
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(2) INFORMATION FOR SEQ ID NO: 181:

1122
(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 8651 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 181:

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GGAGTCAGTT GAAGTAGTAG CCATCTCAGG TAGTCTGCCA GCTGGCCTTC CAGTTGATTA         120

CTATGCGAGC TTGGTAGAAC TTGCTAATCA AGCTGGCAAG CATGTAGTCT TGGACTGCTC         180

AGGTGCAGCA CTTCAGGCTG TTCTTGAATC ACCCCATAAA CCAACAGTCA TCAAACCAAA         240

TAATGAAGAA TTGTCTCAGC TTCTTGGAAG AGAAGTTTCT GAGGATTTGG ATGAATTAAA         300

AGAAGTACTT CAAGAACCTT TGTTTGCAGG GATTGAATGG ATTATCGTTT CACTTGGTGC         360

CAACGGTACT TTTGCCAAAC ATGGTGACAC TTTCTACAAG GTAGATATTC CTAGAATTCA         420

GGTGGTAAAT CCTGTTGGAT CTGGAGACTC TACTGTGGCA GGAATTTCTT CAGGACTTCT         480

TCACAAAGAA TCGGATGCAG AATTACTCAT CAAGGCAAAT GTCCTTGGTA TGCTCAATGC         540

TCAAGAAAAA ATGACTGGTC ATGTCAACAT GGCCAACTAT CAAGCTCTAT ATGATCAATT         600

AATAGTAAAA GAGGTATAAA ATGGCTTTAA CAGAACAAAA ACGTGTACGC TTAGAAAAAC         660

TTTCTGATGA AAATGGTATC ATCTCAGCTC TTGCATTTGA CCAACGTGGT GCTTTGAAAC         720

GCCTCATGGT TAAACACCAA ACAGAAGAAC CAACTGTGGC CCAAATGGAA GAACTTAAAG         780

TCTTGGTAGC AGATGAATTG ACTAAATATG CTTCATCTAT GCTTCTTGAC CCTGAGTATG         840

GACTTCCAGC AACTAAAGCT CTTGATGAAA AAGCTGGTCT TCTCCTTGCT TATGAAAAAA         900

CAGGTTATGA CACAACAAGC ACAAAACGCT TGCCAGACTG CTTGGATGTT TGGTCTGCAA         960

AACGTATTAA AGAAGAAGGT GCAGATGCAG TTAAATTCTT GCTTTACTAT GATGTAGATA        1020

GCTCAGACGA ACTCAATCAA GAAAAACAAG CCTACATCGA ACGCATCGGT TCTGAGTGTG        1080

TGGCTGAAGA TATCCCATTC TTCCTTGAAA TCCTTGCTTA CGATGAAAAA ATTGCGGATG        1140

CAGGTTCTGT AGAATACGCT AAAGTAAAAC CACACAAAGT TATCGGCGCT ATGAAAGTCT        1200

TTTCAGACCC ACGCTTTAAC ATTGATGTTT TGAAAGTTGA AGTTCCTGTT AACATTAAAT        1260

ATGTTGAAGc kTCGCTGAAG GTGAAGTAGT TTATACACGT GAAGAAGCAG CAGCCTTCTT        1320

CAAAGCGCAA GATGAAGCAA CGAACTTGCC ATACATCTAC TTGAGTGCTG GTGTATCAGC        1380

TAAACTCTTC CAAGATACTC TTGTATTTGC TCATGAATCA GGTGCGAACT TTAACGGAGT        1440

TCTTTGTGGC CGTGCTACAT GGGCAGGATC AGTTGAAGCT TACATCAAAG ATGGTGAAGC        1500
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1123

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TGCTATACTT AAATCACAAG TTAATATGAA TTAGAAAGTA ACTATATGAA GTATAATAAA    1740

AATAGGATAT AGTTTATTTT ACGAGCTAGG AAGGAAAAAT ACGGAAACAA TATTGCCAGA    1800

ATAAACTATA TTTAGATGCA CATTTCATTC ATTGTTTTAT AAAAGGAGAA GATAAACGGC    1860

TACTAAAAAG AGTTTTAAAG CGTTAGTTGT AGGACTAGGT ATTGTTTCAA TATTCTTATC    1920

AGCCTTACCT ATGGTTAGTG GTTCTGTATT TGCAGATAGT GCCCTAACTA CAGTAGATAA    1980

AGCAAATGAT ATTGTTTTGA ATGTTGATGG GAATAAATTT TATAATGTTT CGGTTTCAGA    2040

AGATATTGTA AATGCTGGTC AAATTTTGGA AGATTATTTT TATGTAGATA AATTTGGAAA    2100

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AGGTTTTCGT TTCAATCTTG GTCCTCAAGT GAGGGGGATG GGTGGCTGGG CTGCTGGAGC    2280

TTTCGCTACT GGATATGCTG GATGGCATTT GAAACAATTT GCGGTTAATC CTGTTACATC    2340

TGGATTTGTT GCTGTAATAA GTGGTGCGAT TGGCTGGGCT GTAAAAACTG CTGTAGAAAA    2400

TTATTGGACA GTTGCTGTAG CTACAGTAGA AGTGCCGTTT GTGAACCTTG TTTACACCAT    2460

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GTTTTATAGT TTCTTGTGTT CTTTGTTTAT TAGACTTAAT GAATTTTAAA AATGTAGCTA    2580

CTTTTTTATT TTTCTGTCTT CCTGTTTTTG TTTTGATTTA CAAAAATAAA TAAAAACAGA    2640

GCCTCTGTTT GATGAATTTT AGAACATAGT TAAGTTTTAA AAAAAGTTGT ATGTAAAGGT    2700

TTACAAAATA ACTTACTTGT GCTATACTTA AATCACAAGT TAATACAAGG TGAGTGTTAC    2760

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AGGTTGAGAA AATCTTTCGG ATGAAGACCG AAGAGTCCAG AGAAAACTTT ATGGCTCTTC    3060

TCAAAGATGT TCCGCTTGAT TTTATCACAG TGACCTATGA AATCATTGAT AAGCTATCAA    3120

AGAAATATCA TTATCCGATT CAAGAGTATC TCTATGTAAC CTTGACAGAT CATATTTACT    3180

GTTCTTATCA AGCTCTAACT CAAGGAAGGT ACAAGGATAG TAATCTGCCA GATATTTCCG    3240
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1124

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CTAAGTATCC TGTCGCTTTT CAAATCGCAA ATGAAGCTTT TGAAATTTAC CGTCAGAAGC        3300

TAGCAGATCA TTTTCCTGAG GACGAAATTA TTCGGATTGC TTATCATTTC ATTAATGCTG        3360

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ATGATCGCTT TATGATCCAT TTGAATTATT TCTTGGATTA TTTAGACAGA TCTAGAGATG        3540

ATAACCAATC ACTTCTGGAT ATGGAAGATC ATATTAAACA ATCCTATCCA AAAGCCTTCG        3600

AGATTGGTTC CAAGATCTAT GATGTGATTA CGCAACATAC GGGTCTTGAT TTGTATAAAA        3660

GTGAACGAGT TTATCTAGTT CTACATATCC AACGTTTATT GTCATAAAAA TTTATTTAAA        3720

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CGTAGCCTAT GCTGGCGATG CTCGTTCAAA ACTATTGGAA GCCTTGAAGG CTGCTGAAGC        3840

TGGTGATTTT GAAAAAGCGG ACGCTCTGGT AGAGGAAGCT GGTAGCTGTA TTGCAGAGGC        3900

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AACCGTGCAA TCGGACGTGC TTCAGTAGTT CCTACCTTCT TCGGTGTAAA TGAACCAATC        5040
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1125

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GTGCTATCAT TCATTCTTGC TGCCCTTCTA ATCGTGGTTG ACGTTGTCAT TTACTATCCA    5280

TTCCTTAAGG TCTATGATGA ACAAATTCTT GAAGAAGAAC GTTCAGGTAA GTCTAATGAT    5340

GAATTGAAAG AAAAAGTTGC TGCAAACTTC AACACTGCAA AAGCGGATGC TATTCTTGAA    5400

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TACAATGTCC CTGTGAAAGC AGCAGCAGGC GGCTATGGTG CTCACCGTGA AATGTTACCA    5580

GAGTTTGATC TTGTTATCCT TGCCCCTCAA GTTGCTTCAA ACTTTGAAGA TATGAAAGCA    5640

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AGCTGAGTTG GAAGATATCA TCCACAATAA ATTCATCTTA GACGCAACTT ATCTAGGTCG    6720

CTATTCAGCT GAAACCATGG AAGGTGTCAA CCATATCTTA TTAGTCAATG GTGGTAGTTT    6780
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1126

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GGATCTTCGT GAAGAAGATT TTACAGCATT AGAAGCTGCA AAAGACTTGA ATGATTTCCT    6840

AGGAATCAAC TACTATATGA GTGACTGGAT GGAAGCCTTT GATGGAGAAA CTGAAATTAT    6900

CCATAATGGT AAAGGTGAAA AAGGAAGCTC TAAGTATCAA ATCAAAGGTG TTGGTCGTCG    6960

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GTATGACCAA ATCATGCGTG TGAAGAAAGA TTATCCTAAC TACAAGAAGA TTTACATCAC    7080

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TATTGATTAC GTGAAGCAAC ACTTGGAGGT TTTATCTGAT GCGATTGCAG ATGGAGCTAA    7200

TGTAAAAGGT TACTTCATTT GGTCATTAAT GGATGTCTTC TCATGGTCAA ACGGTTATGA    7260

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GGTCCAATGA AAATAGTTTC TCTTTCTTCT ACTAGACTGC CTGCAAAATG GGCTATTTCT    8460

TGTTTTTCTG CCGTTTGGAG GGCTTGTTTT TCAATATTTG ATCGCTCATT AGTCAAAAGG    8520

GAGTTGGTTC GAAGTTTTTC AGCTCCACCA TGCACACGAA TCAGCAAATC TTTATCAGCT    8580
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1127

AATTCCTGTA AATAGCGCCT TGCAGTCATA TCTGAAACGG CTATTTCGTC .CATAATCTGT   8640

TTAACTGTTA T   8651

(2) INFORMATION FOR SEQ ID NO: 182:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3786 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 182:

AATCTCCAAT CAGTGCCACT TCAGCTACAA AGAAGAGGAG GATAATAACT CCGTTCACAA   60

GGACAGACAA GAATAATTGA TAGAAGGAGT CGGTTTCACT TGCTTGACTT GGTCTTGTAA   120

TGATwTGGAG ACTGGCAAGC AGAATGATTC CAATGCTAAT CACACACAAG AGGGCTGTAA   180

ATCGTAGGCT ATCAAAGAAA GCAAAGAAAC TAGCAATAGC AGTGAGGAmG ATTGGAATTG   240

CCAAGAGTTG ACTATATTGT TGGAGAACCT TGTCTAGCGT CCAGTCCTTT TCCTGGTGGA   300

TAAATCGTCT CACAACGAAA CTACCCAAGA GGAATGAAAA GAAGAAGAGT GTTGTCGCTA   360

CTAGGATAGA GATGATAGAA AAAAGAGTTA AAGGAGCTAG CTGCTCAGGG AAGCGACTGT   420

TAATGCTTGC TATATGTCCA TAGTAAGCAT GTTTGATGTG ATAGATACTA AAGAAAAAGG   480

AAGATGCAGA AAACAGAATG AGCAAGAGAA AGGCTGTGTA ACTGTGTGTG ATACTTGTTT   540

CCAACTTACT TGTAGGAGAT TTGATCGCTT CCACTAGCCA AGACCAAAAA TCAAGCACTT   600

GCTCTTTCCA TTTATCCCTA GATTTTGGAG CTTGGTCGGG GATATAAGGA CTTTCTAAAG   660

ATTTACTGAT AAGAAGTGGC TCTTTCGTGG TTGCTTTTTG CTGAGGAAGA GCTTCTTGGC   720

TCTCTTCAGC TATAGTGACT TTTTCTGTTT CTTTAGAAAG GTCTGGCTCT TCTTCAGTAG   780

AATTAGATGC CTTCTTTTCT TCTATTTCTG TTCTCGCTTC ACTGTCTTCA GGAGCTTCAA   840

TTTTCTCTTC TTGCTGGCTT TCCAATTCGA CTTCAGCTTG AGGGACTTCC TCCTCTAACT   900

GAGTATTTTT TTCAATTGGT GTATCGAGAT CGGCTATCGT TTCTTCAGCC TTGTCTGCAA   960

CCTCTTGAGC TTGCTCTTCA GGCTTGTTCT TGCTTGTTGT TTTTACAAAA TCATTACTTT   1020

CAAACCATTC TTGTTTCATG GTAGAACCTC CTTTTTAGTT AGATAAATAT GTTTCCATAG   1080

TAGCAAATGT AAGCGTTTTT GTCAACGTCT GCTTGGTGTG GATATTAGAT CAATATTATC   1140

ATCAGATCTC GCAATGAGTT GATCCTTGAC ATCGGTTTTT TCAGTTTTGT AAGGGGTTGCT   1200

TAATTCCGTA CCTCTTGATT CAGGCTTTTC TCTTGTGAAT TGGAAGATAG AACCATAGTT   1260

1128

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GCTTGAGATG TCCCAGTTAA TTCGTTGGCT TTCTTTCTGG TCTAGGATGA TTCTGAGATA      1320

ATCTTTGGCA GTCAGTTCAA CCTTGCCATG GACTTGGATA TTTTCAGCGT GGAAGTGATT      1380

CTCTGTTGAC TCTAGCTGAC TATCTGTAAG AACTGTATCA AAGATATTAA CGATATTGGG      1440

CGTTGTGAGT TTACTGTTTT TGATACGACT TCCTTCAATT CGGAGGATAT AGCTGTTTGT      1500

ATTGAGGGTC GCATTTTCAA GGCTAGCATT TATGATGGTG GTTTGTCCGC GATTGGCTGA      1560

GATGTTGATC CCTTTTAGAG TTCTCCCTTT TGGTAGTCGG AGAATAACTT CTTCAAAACG      1620

ACTAGAGTAG CTACTTGCGA TATGAAGAAT CCCACCAATT CCAGAAGAGA GAAACGGAGT      1680

TTCAGACAGT TTCTTATCAG TGAGACTCAG AGTTCTATCG TTCTGATTGG TGATAAGATC      1740

ATGGTGAGCA GAAAGAGATG GATGGTAAGA AATGTGGATT TGATCATCGA AAGAGTCTGT      1800

GATGGTGAGC GTGTGTTGGT GGAGAGTAAT TTCTAGGTTT TCGACTTCCT TGCCAAAGGT      1860

TAGCTTTTCC GTACGGCTAT CATAGACAGG TTCTTTGGAC ATGGAAAGTA GGCTCTTAAt     1920

CCCGTCAGAT TGGATACCTA CAAAAAGCAG GATAAAGCCG ATAACGGTAG TCACCACACC      1980

AAAGATGAGA AATCCTTTTG TCCATTTACG CATGCTGATT ACCTCTCTTT CCTTTTTTAA      2040

GAACAAATTG TACCAGACGA ACAATGAGTA GACCGAAGAA GCGAGTTGCA TAGGAAATGC      2100

CAAGTAAAAC TAGCGAAGAA GCACCGATAG CCAGTAAACC AGAACCAAAA ATCAAGATAA      2160

AGGCTGATTT GGCTTGGGCG AGGACAGTGA AACTTTCAAC TAAAAATAGG AATCCGCCGA      2220

TGATACCCAG TATGGAAACT GCAAAGAAAG CCAGAATGAC AGTCAAAGCG CTACAAGAA      2280

TTGCGAACAG GGTCACGAGG ATGGCGATTC CCAGAGGAAT GCCGATAGGT GCTGCAAGGA      2340

GGGCTAACAA GGCGATATGT AAAATTTGTC GGTTATTTTT TTGAGCGGGT GCTTCATTGA      2400

TTTTTTTATC GAGAAGATTG GATAGAACTT CGTGGGCCGC TTCTTTGGGA GTTCCCAAAC      2460

TAGCGATGAG TTCTTCTTCT CCTTCGACTC CAGCATCGTC AAAGAGCTCT CTGAAATAGT      2520

CCATGGCTTC GATACGGTCA GCTTCAGGTA GTTTCTTGAG ATAGAGTTCT AGCTGAGTCA      2580

GGTATTCAGT TCTTGTCATG GCGGATACTC CCTTCTATGA TGCCATTGAT GGTGTCTGTA      2640

TAGAGTGCCC ATTCATCTTT TAGGGTCAAG AGCTGCTCTA TACCACCGTT TGTCAAGGAG      2700

TAGTATTTGC GCATGCGACC TTGGAACTCT CTAGAATAGG TTGTCAGAAA GCTATTGCCT      2760

TCCAATTTTT TGAGAATGGG ATAGAGTGTG GATTCTTTGA TATTAGCGAT CAGCTTAATG      2820

GTTTGGCTAA TCTCATAACC ATAAGAATCA CCCTGCTCCA GTACAGCCAA GATGAGAAAT      2880

TCAATCAAGG CAGAGGATGT TGGAAAGTAC ATGGGAAACC TCCTTTTCTA ATGTGTAAGA      2940

TTTTTATATA TAATTTTTCT ACACATACAT TGTACATCTA AAAGAAAGCC CTGTCAAGAG      3000

AAATGTGTAA AATTTTTATA TATAAAAAAC TTCTAGCTAA AACTAGAAGT TTAAAGGATC      3060
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1129

TTATCCGCTC TGTCCACTGT AAAGAGGGCC ACAGTCATCA GGATATCGAT GAGCAAGAGG   3120

GCAGCTACAG ATGGTACCCA AGAGTGGAAC AGGTCAAAAC TGTAACCAAA GAGGGTTGGC   3180

CCAAAGGCTG CTAGGATATA GCCTCCTGTT TGAGATAGGC CGGACAATTG GGCTGTCTTT   3240

TCAGGGGCGC TTGTCTTGAG TGAAAAGTTG ACCATGAGAT AAGGGAAGAG GGCACTGGTT   3300

GCGGTTCCGA TGAGGAGATG GATGGCAAGC CAGTAAATGA AATTATTGAT TGGGAAAAAG   3360

AGCATGGAAA TGCCGACCAC ACCAGCTAGT GAAACCAGAG TGAGCATGAG CTGACGGTTG   3420

CGAGTAGATA AACTGGTTGT CAGGCTTGGG ATGGTCATTG AAAAAGGAAT GCTAATCAGA   3480

GATAAGATAG AAGTCAGCAA GCCAGCTTCG TGACTGGATA GACCTGCATG GATAGACATG   3540

GTAGGTAACC AGGTCATGAC GGTGTAAAAG ATCAAGGATT GAAAACCTGA AAAGATAATA   3600

ATTGCCCAAA CCTGTTTATT ACGCATGACC TTTATTTGAC TTTTTTGTTT GGTTTGTGGA   3660

GCTAGTCTAT GATTATAGCG GTGATTTGGG AGCCAGACCA AAAAAGTTGC TAGACAGAGT   3720

AACGTGAGGA GAAGGATAAG TCCTTTCCAA GAACTGGCTT GTGTAATGGG CACAGCTAGA   3780

TAGGAA   3786

(2) INFORMATION FOR SEQ ID NO: 183:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 3054 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 183:

TCAGCTAAAA AACATTGCTA AATTGATTGA AGCTGGTGCT ACACATTCCG ATTCAACTTC   60

TCACACGGCG ACCACCAAGA ACAAGGTGAG CGTATGGCAA CTGTTAAACT TGCGGAAAAA   120

ATTGCAGGTA AAAAAGTTGG TTTCCTTCTT GATACAAAAG GACCTGAAAT CCGTACAGAA   180

TTGTTCGAAG GTGAAGCTAA AGAATATTCA TACAAAACTG GTGAAAAAAT TCGTGTTGCA   240

ACTAAACAAG GAATCAAATC AACTCGTGAA GTGATTGCGT TGAACGTTGC TGGTGCTCTT   300

GATATCTATG ATGATGTTGA AGTTGGTCGT CAAGTTTTGG TTGACGATGG TAAACTTGGT   360

CTTCGTGTGG TTGCTAAAGA TGATGCAACT CGTGAATTTG AAGTTGAAGT TGAAAACGAT   420

GGTATCATCG CTAAACAAAA AGGTGTGAAC ATCCCTAACA CTAAAATTCC TTTCCCAGCT   480

CTTGCTGAAC GCGATAACGA CGATATCCGT TTCGGTCTTG AACAAGGTAT CAACTTCATC   540

GCAATTTCAT TCGTACGTAC TGCAAAAGAT GTGAACGAAG TTCGTGCAAT CTGTGAAGAA   600

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                              1130
ACTGGAAACG GACATGTTCA ATTGTTCGCT AAAATCGAAA ACCAACAAGG TATCGATAAC      660

TTAGATGAAA TCATCGAAGC AGCTGATGGT ATTATGATTG CTCGTGGTGA TATGGGTATC      720

GAAGTACCGT TCGAAATGGT TCCAGTTTAT CAAAAAATGA TTATCAAGAA AGTCAATGCT      780

GCAGGTAAAG TTGTTATCAC TGCAACAAAC ATGCTTGAAA CAATGACTGA AAAACCACGT      840

GCAACTCGTT CAGAAGTATC AGATGTATTC AACGCTGTTA TCGACGGAAC TGACGCTACA      900

ATGTTGTCAG GCGAGTCTGC AAACGGTAAA TACCCACTCG AGTCAGTAAC TACAATGGCT      960

ACAATCGACA AGAACGCTCA AGCTCTTCTT AATGAATACG GACGTCTTGA TTCAGATTCA     ·1020

TTTGAGCGTA ACTCTAAGAC AGAAGTAATG GCTTCTGCTG TTAAAGATGC TACTAGCTCA     1080

ATGGATATCA AATTGGTTGT AACTCTTACT AAGACAGGTC ATACTGCACG TTTGATTTCT     1140

AAATACCGTC CAAATGCTGA CATCTTAGCA TTGACATTTG ACGAATTGAC AGAACGTGGC     1200

TTGATGTTGA ACTGGGGTGT TATCCCAATG TTGACAGATG CTCCATCTTC AACTGACGAT     1260

ATGTTCGAAA TCGCTGAACG TAAAGCGGTA GAAGCAGGTC TCGTTGAGTC AGGCGATGAT     1320

ATCGTTATCG TTGCTGGTGT GCCAGTAGGA GAAGCTGTTC GCACAAACAC AATGCGTATC     1380

CGCACAGTAC GTTAAGAAAA ATATAAAAAC CTATCATATC CAGCTTTAGA GCTTGTGTGA     1440

TAGGCTTTTT GTATAGAGGG TAAGAAATAG GCAAAACTTT CATAATGGAT TGATACTCTT     1500

CGAAAATCTC TTCAAACCAC GTCAGCGTCG CCTTACCGTA TATATGTTAC TgACTTCGTC     1560

AGTTCTATCT ACAACCTCAA AGCAGTGCTT TGAGCAACtG CGGCTAGCTT CCTAGTTTGC     1620

TCTTTGATTT TCATTGAGTA TGAAATAAGA TATGCACAAA TTGATTAGAA AGTCAAATGA     1680

ATTTCTACAA ATGTTTTAGC AATCGTAATG TACTTGTCTA GATTCGATCT GATATATTTT     1740

CGATTTAATG ATATGGTATT TAAAACCTCC AAAGTAGCTT ACTCCATTCT TTTACTTACG     1800

TGAGTGTAGA TGTTATTTAC TGTTTTAGCG TTTTTGTGTT CCACTCTAAC CATTATAGCA     1860

TTCTTCTCAG CTAGTGTACT AAGGAGTGTG TGCCTGAAAA TATGGGAACT AAGGGGCTGG     1920

TTTATCGGTT TCTCTAGTTT AGTATTTGCC TTTTGCAAAG TGATCTTAAA TGCCTTTCTC     1980

TAAATTTACA TATCACTATT GTTTAACAAA ATCTAATCTA TTTTAGGTCA CTTATTCTTT     2040

TTTTGAAATG TAGAATGAAC TTTTTCAAAG TTTTTCGAAT CTTTTAAAAT CTGTTTGCTT     2100

TATATCGCCA TTCTCCCCCC TTTTTTAATT CTCCCTATAT AGCCTGACAG CTTTCCCGAT     2160

GGTACGAATA TGGTTGCTTT CGTCTAGGTG GATGTCGGGG TATTCGGGAT TGAGTTTTTT     2220

TGAGGCAGCC TTGGCGGAGT TTCTTGACAT AGTTAGTGCC GTCTACTTGG AAGATGCCGA     2280

TGGTATTATA GTCAATCTGT GGGGTATTCT TGATAAATAG GTAGTCGCTG TTTCTTATCT     2340

TTGGCTCCAT GGACTTGCTG ACGACATAAG CGATTGGGTC GTAGTCGTCT GGGATAATGG     2400
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1131

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AAACTCCATA TCTAAATCGT TGTCCTGCAT CGAGCGGCTA CCTGCAGAGA TAAACTACCT      2460

AACACGAGAG TAAGTAGTCT GTCTGTAGTC GTCCAGTCTG ATGATTTTTA CGATACTTCG      2520

TTTTTCTGAT CATACAGTTG CCTCTCGGCA TAGGTCAGAA CTTTACCTTG TCTGGGTGGT      2580

TCCCGTTGGT CGTAGATAGA TTGGATATCG CTAGGAGAAT CCTTTTGAAC TGGAGGAAAG      2640

AGGGCATCGA TCAAGCTACT GAATACTTTA ACTAAGTCAA ATATAGTATT TTTCTTAGTA      2700

GACCTAACCC TTTTTTCATA ATTTCTAATG GTGTTTTTAC TTATACCTAT CTTAGTACCC      2760

AATTCTTATT GAGTCCAACC ATTACTAGTC TATATTGTTT TATAGTTGAT TGAGTTTGGA      2820

ATAGTACGCT GTAGCTGCTA AAACATTTCT AGAAATTAAT TTGACTTTCC TAATAGAGTT      2880

GTTCATATCT TATTTCAATC TATTATGTTT TTCACCTCTA ACAATCGCAA TCTCTTCTTT      2940

ATCCATGAAT GAAATCGCTT TCTATTTTTG TAAGTAAAGC ATAACACGAA ATCCACGAAA      3000

ATGAAAACCT TTGTTGTGTT TTCGTAAAAA ATTTGTTGAC AGAGCACGAA ACGC           3054
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(2) INFORMATION FOR SEQ ID NO: 184:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1590 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 184:

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TGTGATTTTC yGAAAATTTG GTAAAATATA TCTTAATCAT TTTCAGGAGG ACAAAAATTT       60

GACAAGATAT CAGAATTTAG TAAATGGAAA ATGGAAATCA TCTGAACAAG AAATTACGAT      120

TTATTCACCA ATCAATCAAG AAGAATTGGG TACAGTTCCA GCCATGACTC AGACTGAAGC      180

TGATGAGGCT ATGCAAGCTG CGCGTGCAGC CCTGCCAGCA TGGCGAGCTT TATCAGCAGT      240

TGAACGTGCG GCTTATTTGC ATAAAACAGC AGCTATTTTA GAACGCGATA AGGAAGAAAT      300

TGGTACTATC CTTGCCAAAG AAGTAGCAAA AGGGATTAAA GCAGCAATTG GAGAAGTAGT      360

GCGTACAGCA GACTTGATTC GTTATGCTGC TGAGGAAGGT CTCCGTATCA CTGGACAAGC      420

AATGGAAGGT GGTGGTTTTG AGGCAACAAG TAAAAACAAA CTGGCTGTTG TCCGTCGTGA      480

ACCAGTTGGT ATCGTGCTAG CGATTGCTCC CTTTAATTAT CCAGTTAATT TATCTGCTTC      540

TAAAATTGCA CCTGCCTTGA TTGCAGGGAA TGTGGTCATG TTTAAGCCAC CAACACAAGG      600

TTCCATTTCT GGACTCTTGT TGGCTAAAGC ATTTGAAGAA GCAGGGATTC CGGCAGGTGT      660

TTTCAACACC ATTACAGGTC GTGGTTCAGA AATTGGGGAT TATATCATTG AGCACAAAGA      720
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1132

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AGTCAACTTC ATCAACTTTA CAGGTTCAAC TCCTATTGGA GAACGTATTG GTCGTTTAGC        780

TGGTATGCGT CCTATCATGT TGGAACTTGG TGGGAAAGAT GCAGCTCTTG TACTAGAAGA        840

TGCAGATTTG GAACATGCTG CCAAGCAAAT TGTTGCGGGA GCCTTTAGCT ACTCAGGACA        900

ACGTTGCACG GCCATTAAAC GTGTCATTGT TCTCGAAAGT GTAGCAGATA AATTAGCTAC        960

TTTGCTTCAG GAAGAAGTTT CTAAATTAAC AGTTGGTGAT CCATTTGACA ATGCTGATAT       1020

TACACCTGTT ATTGACAATG CTTCAGCCGA CTTCATTTGG GGCTTGATTG AGGATGCACA       1080

AGAAAAAGAA GCTCAGGCTC TTACACCAAT CAAACGTGAG GGCAATCTTC TCTGGCCAGT       1140

GCTTTTTGAC CAAGTTACAA AAGATATGAA AGTGGCATGG GAAGAGCCAT TTGGTCCTGT       1200

TTTACCAATC ATTCGTGTGG CTAGTGTAGA GGAAGCTATT GCCTTTGCCA ACGAATCTGA       1260

ATTCGGCCTT CAATCATCAG TCTTTACAAA TGATTTCAAA AAAGCCTTTG AAATTGCTGA       1320

AAAACTTGAA GTAGGTACAG TCCACATTAA TAATAAAACC CAGCGTGGTC CAGATAATTT       1380

CCCATTCCTT GGTGTCAAAG GTTCTGGAGC TGGAGTGCAA GGAATTAAAT ATAGCATTGA       1440

AGCGATGACA AATGTCAAAT CCATTGTTTT TGATGTGAAA TAACGTGTAA AACCAGGAAA       1500

TTGTTTTCCT GGTTTTATTT TTTTGCTATA AAATAATAAT AATTATAGAA AAAATACGAA       1560

CTTTTTGGTA TTATAATAGA TTGAAACCGG                                        1590
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(2) INFORMATION FOR SEQ ID NO: 185:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 4848 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 185:

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CCTGCAGTTG TCAGACCTGT AATTTTCTTT TTATCTGTAA TAAGAATCGT TCCAGCGCCT         60

AGAAAACCCA CACCTGATAT AACTTGAGCT CCTAATCGTG TAGGATCTCC TGTCCCAAAT        120

TTATAAGATA CGTATTCATT CGTCATCATA ATCAAACATG CAGCTAGACA AACAATACTA        180

TAAGTTCGGA TGCCTGCAGG CTGGGATTTG CTCCCTCTCT CTAAACCAAT TATACTACCA        240

ATGACTACTG ATAAAACAAT CCTGACAACT ATTTCAATAT TTGATAACCC AAGACTAGTG        300

GCTGTCATGA TTATTTCCTT ACTTTACGCC CCGGTCTTTG TGTGAAGTAT AATACCGTTC        360

CAGAAATAAT CATCAGAACA ATTGTATAAA CAAATACCAG AGCTTGTGCA TTAGATGTTG        420

CTGTTTCATC ACCTGCAGAT CGAATCGTAA TACCTAATGG TTGAGCTAGG GGATGGTAAA        480

GGAATACAGA TAAGTCGAAG TCAGTTAATA AAGAGTTAAA GTTTAAAGCA ATAACAGAGA        540
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1133

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GAACAACCGG TAAAATAAAT GGAATGATAA CCTTCATCAT AGTATAAAAA GGTGAAGCAC        600

CCATACTTCT TGCTGCATCT TCCATCTCAT CATCAACACT AAATAAAATA GCACGTACCA        660

TTCTATAAGA AAATGGGATT TTTACAACTA TATATGCAAT AAGTAGAATT ACCAAACTAC        720

CTACCAAAAT CTGATTCAAG ACAAGAAATT GTGGCTGATT AAAAGTAAAT AATAAACTTA        780

CTGCTAAAAG TGTACTTGGT AGTAACCAAG GAAGTAGAGC ACCATATTCA AATAAGAAAT        840

CAAAACGAGA TTTATGTTTT CTGACAACAC GAGCAAATAC AACTGCGAGA ATTGTTGCTG        900

TTGTCGCAGC AATAATAGAA TAAATAAAGC TGACCAAGAA TGGAGAGAAT GCCGCACTAT        960

TACTAAAGAA TAAGCGATAA TTTTCTAAAG TAAAGTTTGA TAATGTTAAG TTACCTGTTT       1020

GAATTGCAAC TGGATCTGTA AATGAGTATA ATACTATAAA AATTAGTGGA AGCATGAAAA       1080

CTGTGAACAA TCCATATGCT ACAATGTGAG CAATGATATT CCAAGGCTTA GACGCAATTT       1140

TTTGTTTTTT AAGAGGCGCT TTAGTCTTAG AGATAGAAAT ATAATTTCCA CCTTTTTCTA       1200

TCTTATTCAT GATAGTAAGC AAAATTGTAG TTGCAATACC TAAAATAATT GCAAGTAGGG       1260

CAGCTAAATC ACGAGAATTC CCCATCCCTG CAAATGTAAT AATCATTGGA TTTATAGTTT       1320

GAAATTCTTT ACCACCAACA ATCATGGGTG CTGCTACTGC AGATAAACCA CTAAGAAAAA       1380

CCATAATAGT AAGTGCAAAT AGAGTTGGAA TTAAGGTTGG TAACACTACT TTTCGGAAAA       1440

CAGTAAATGG TTTTGCTCCC ATATTTCGAG CAGCCTCAAT AGTGTGATAG TCAACGCTTC       1500

GAATTGTATT TGTTAAAAAC AATGTATGAT TAGCAGTTCC TGAAAATGTC ATAATGAATA       1560

AGACTGCACC ATACCCAATA AACCAGTTAG GGTCTAAAGA AGGGATAACA TTTTGTAAAA       1620

ATTTTGTAAT CAATCCATAA GGACCATAGA CAAATTTATA TCCAGTCGCT AAAACCACTC       1680

CTCCATAAAT TAAAGAGGTC ATATAACCTA ATTTTAAAAT TTTAGCACCT TTAATATCAA       1740

AGTACTCTGT AAATAGAACA CAAAGAATAC CTACGACATT AACTGTAATA ATGAGTGAAA       1800

ATGCTAACTT AAAACTGTTC ATAATACTCT GAAGTGCCCT CTGAGATTTT AGAACACGAT       1860

GTACAGCATC AAGGGAAAAT TCTCCTCCTT TTACAAATAC ATTCACTACT AGATCAAAGT       1920

TTGGATAAAT AATAAATGTT ACTAAGAACC AGATTAACCC TAAACGAATA AGCCAATCTT       1980

TTAAATTTAA TTTATGACGC ATACTGCACC TCCTTAAAAT TGCAGAACGT CTGATGGTGT       2040

GATAAATAAT TCCACACTTT CTCCGACAGA TCTAATAGCA GCCTGACTAT CAATACTTGT       2100

TACATTAAGA ATCTGACTTT CAGAAACTTT TATTGTATAG TGAATTGTAA CTCCAGAAAA       2160

CTCAACATCA ATAATTGTCC CTTTTAGAAT AAAATCTTGT TCAGTTTCAC GATTGAATCG       2220

AACTTTCTCT AATCGAATGT ATCCTTTTTT ATCCTCTAAG AAAACGCTTG TATTTTTCAA       2280
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1134

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TAATACTTCG TGGACTGTTT CATCGGTCAA AACATTAATA TCTCCAATAA AATCACATAC    2340

AAATTCAGTT TGAGAATTAT GATAAATCTC TACTGGTGTA CCGACCTGTT CGATGTATCC    2400

ATTGTTAAAG ACTGCAATTC TATCAGATAA AGTCAAGGCT TCCTCTTGAT CATGAGTAAC    2460

ATATAAAGTA GTAATACCTA ACTCTTTTTG AAGTCTTTTC AACTCTTTTC TCAAATCTAC    2520

ACGTAATTTT GCGTCAAGGT TTGACAATGG TTCATCTAGA CAAAGAATTT TAGGTTCAAG    2580

AACCAGAGCA CGAGCCAATG CTACCCTTTG TTGTTGACCC CCAGATAATT CTGATACATT    2640

ACGCTGTAAC TGTTGATCAG AGATCTTAAT TTTTGCTGCC ACTGCTGATA CTTTAGCTTT    2700

AATAACATCT GGAGCTACCT TCTTAACTTT TAAACCAAAT GCAATATTAT CAAAAACAGT    2760

CATAGTTGGA AATAGCGCAT AAGATTGAAA TACAATACCA ATTCCACGCT TTTCAGGTTC    2820

CAAATGAGTG ACATCTGTTC CATTAACTTC AATACTTCCT GATGATGGAT CTAGAAAACC    2880

TACCAATGCT CTCAAAGTAG TTGATTTACC ACATCCTGAA GGCCCAAGAA ATGTAAAAAA    2940

TTCCCCTTCA TGTATATCTA AATTCAGATT ATCAATTGCA ACAAAATCAC CATATTTAAT    3000

TTGAATATTA TCAAATTTAA TCATCTCACT AACTCCCTCT ATTACTAAAC CAAAAGCCTC    3060

TCTTTATTTC TTCCATAAAT TTAGAAATAA TAGAGAGACT TGGACATAAA AATTAACTCT    3120

TATTTCTTAT TGTACGTATT CTAATTCAGC TTTTTCTACC CATTCATCCA AATGCTTTCC    3180

AACAGCTTCC CAGTCAATAT TTTGTGGTTT CACTTGATCA ACAAATTTCT TCGTATCTTC    3240

ACGTAGATCT TTGAGGGCAT CTTTATTTGC AGGAATAGAT CCAAAGTTCT TACTATATTC    3300

TACTTGAATT TCTGATTGAC CAAACCAATC AATAAATTCT TTAGCTAACG CTTGTTTTTT    3360

ACTAGTGCTT AAAACCATAG TTTGTTCAGT TACAAATGGT ACACCAATCT CAGGAGTCAT    3420

AACTTTGAAA ACAACATTTT GTTCTTTTTG TCCAACTAAT GCACCAGAAC CCCACATCAT    3480

TCCATATTGT ATTGGATCTT CTTTGTCTAA CATCTTAACA ATTGAACTTT CTCCCTTTTG    3540

AAGAGTGTAT GCATTTTTCA AATATTCTTT TGCTACTTCC CAACCTTTTT CGGAAACACC    3600

TAATTCACCT TTATCATCAA GGTATCGAAC TAAGATACTT GCTAGAATTG CCCGTCCTGT    3660

ACCTCCTTGA AGACCAGAAA TTGAATATTT ACCTTTATAC TTACTACCTA ATTCAGTCCA    3720

ATCTTTAGGC ATTTCTTTTA CATCAGGCGC CCCAATTAAA ACTAATGGTT GAACAATCAC    3780

AGGATTATAA TAATTATCTT TATCTGATAA AGATTGATCA ATTTTATCTA ACCATTTAGG    3840

CTTGTACTGT ACTAGTAATT TTTGATCTCT AATTTTATTT GAATCAACAG CACCAATTCC    3900

AAATACCATA TCTGCAACTG CATTATTCTT CTCAGCAATA ACACGGTCTG CTAATTGAGC    3960

GCCAGCGATA TCAACCATTT TTATATTAAA ACCAGCTTCT TTTGCTTTAG CAGTTAACCA    4020

ATCACCACGA CCATTTGAGA CTGAGTTCGA ATAGATAACT AATTCTTGAC TTTTATCAGC    4080
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1135

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TTTTTCTTCA GATGAAGAAG CAGTCGTAGA ATTTGAACCT CCAGAGCAAG CAGCAAGTGT    4140

AGTAAgAGCA ACTCCCGTTG CAAGTACAGT AGACCAAACT TTCATTTTTT TCATGATAAG    4200

TTCTCCTTTT TTATTATTTT ATTTAAATTT TTCGTGATAT GGAACAAATT GTCTCATATC    4260

TTCAAATACA GTATAGTCAA TACGGTTTAC AGTAATAGTT GGAATCTTCT CTAATAAAAT    4320 .

TTCAGTTAAT TCTGCTCTGA CTTTAGTAAA CTCTTCTTCC TCCTCTTCGG TTAGAGGAAT    4380

CCGAAGATAC CCAATTGAAA TATGGAATTG ATATCTATCA TGATTAGGGA AACAAACACC    4440

TGCTTTTTCT GAGACATAAG TACGAATTTC TTCTAATCTC TTTGCAGAAG CTTCATCTGC    4500

AGGTTCAACT AGTATGTTTT GTTTTCCCAT TTCAGTTATA CGCATATGAA TTTCTTCATC    4560

CAACAATGGA AAAATTTCAA GTTGTTTAGC AAAGTAATCA TGTATTTCCT GTAAAGGTGT    4620

ATCTAGAGGA AGATTACTGC TCCAAAACTC gtTCACGATT TTCATGGCAC AACAATTCAA    4680

TTACAGTCAT GTGAATAGAA TTCCTTGGAG TTAAAGTAAA CTTATCGATA AATGGTAATT    4740

CTCTATAACG TGATTGAATA ATATCAACAA CTTCCATCAA ATCTTGTTTA GTATAAAGAT    4800

TTGCTACAAC TGTATTCCCA GGGAAATGAT TAAATTCCCC ATTCTCGG              4848
```

(2) INFORMATION FOR SEQ ID NO: 186:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3763 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 186:

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GTTATAAGCA ACACCTTCTT GCTTGCCATA AGTTGTGAAA TGGGTAGAAT CGATATCTAC      60

AATGAGTTGG TTTAGCTGGT GAAACTGTAA AAAGAATTCG ACCAATTCAA GGTTGAGGCA    120

TCGCAAACTA TGGACTGTTT CCTCGTCAGT TCTGGAAAGA AAACGGGATA AGGTTGGCTG    180

TGAAGCAAGC TGCCCTCCTT CCAATAATTT TGGAAAGTAG GCATCAGCTG ACAATTCTTT    240

ACAAGCATAG TCCGTTCCAT AACCTGTTAA CAGTTGAAAG AGGAACTGGA CAAGGATATC    300

TGAATCCGAA TAACGACAGT AGCGGCGTTG GTCATTCGTT ACTAAATACT TAGAAATCCG    360

CTCTTTTAGT TTCAACTGGG AAAAAAGTTC CTGAAAAAAG ATAAGACCAC CATACTGGGT    420

TAAATGACCT CCATCGAAAG ATAGTTGGTA AAAAGACTTG TTTTGGAAGT GATGATTTGG   . 480

TAAACTGTTC ATGTGAGTTT CCTTTCTTTT TGTGTTTTTT TCTACACTTA TACCATAAAG    540

GGGAAACTCT TTTTTGTCTA GTAAAAAACA CCCATTGGGT GAAAAAAGAA ACCATCCAGG    600
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1136

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ATCTAAGCTA AGGCAAGGAT TCTGGATGGT TTTTAGATTT GGGGTGAATA ATTGGGGATT        660

TAGGAGAAAT GATGGTATCT TCCAAATCAA AATCAACTTC ACTCCATAGT CTCAACTGAT        720

TGATTTTCCC ATCTTGATAG GTCACATCCT TGTCAAGGAT AAACTGAGTC AACACCTCAT        780

GTTGACCTTG ACACCTGATG TCATCTACCA AGAGCCAGAC ATCCTCTACC AACATGAGGA        840

TTTTTCTCCT GTGAAGATAA GGCAAATCAG GTTCTGCTGA CCAATAAGCC CCCTCAATAT        900

AATGCACTCC CTCCCTTTCT TTATGGTGAC AAAACAGGGA GTGAGGATAG TATTCATATT        960

CCCAGGATCC CGTGATTCTT TCCGGAGCTT TCCCATCTAC AATGCAGGTC GAATGACTCC       1020

AAGCACTCTT TAAGAGATAA CGTTCATATA TCTCCCGATA AGAATAACGC CCAGCATCTA       1080

TGAAAATAGG TTGGCCTTGA TACTGTAAGC AAAAACTATT CTCGTCACTA TGACTATGGG       1140

CACTTCCTAG CGGACCATTT TTGAAAAATA GATAACGATG TTCATCCTTA ATGCAGACAT       1200

GTCCAGAGTC TTCAAAGATC ATGGACTTAG GCTGCCAAGC TCTCTTTTCA AATTCCTGCA       1260

GTCGCTTGAC CTTTTCTCGC CCCAGGAACA AGAGGCTAAG CAAATCAACT TTAACATCCA       1320

GACCGTTAAG AAGGTCTTCC TGGTTCAAAA CCACAGCAGA CAGGCTCAAA ATTTCTGTCG       1380

TTTCTGTAGA ATCGCTATCA CCAAAAGCCA AAGTCCGTCC ATCTAAGCCT GTCATCATTT       1440

GAATATAGGT CGCCATCTTT TCCAGCAACT CTTGGTAACT ATCTTGCAAG TCTGGAAGCA       1500

AGAGACACAA ATCCAGCAAG GCTTTATAAA CCTCTACATG ATAGAGAATC GACTGTTCAA       1560

ACTGGCTTCC ATCTCCTAAA ATCTGTGTCT CAATTTGCTG TTTCAACTCC TCTGAAGCAA       1620

AATGGTAAGC TTCTTCTAGA TCCATCTTAT CTGAAAAGAA ATGATAGATA GCAAGCATCG       1680

GAATTGTTTG TAAAATCCCC CAGTTACTAA GGGTGTACTT GGCGCGATAG TAGCTTTTCA       1740

TAAAGTCAAT CTGCTTTTCT AGACTGACCA AAATTTTCTC TAGTTCTTTC TCCTCTAGCA       1800

AGTCAAATTT CAAGAGGAGC AAGAGTAGTT TCAACCAAGT AAAGGAACGA ATACCCGTAT       1860

CCAAGGTTCT AGTCATCAAG GATTGAGGAG AAAATTCTCT CACCTGCTCA ATCCAATCAA       1920

ATAGAAAGAA CTTGCACTTT TGAATATAGT CCTTATCTCC TTCTACCAGA TACCCTATCA       1980

TAAACTGCAA GAGATATTCT TGTCGATTGA GCATATAAGA CCATTCTGGA TCATCTTCAA       2040

ATACTTGATC CCATACCATC GGCTGGATTT GATGGATTTT TGAACAAGGC TCCATATCCC       2100

AAGGACTATC AAACATAAAA CGATTGTCCA TCAAGCGTTC AAGGGAACTC TTGACTTTCT       2160

CATAGTCTTT TGAACAGTGC GACAAGATAT AATCACGACA TTGATTTCCA TCGACTCTTT       2220

CAAAAAATTG TCTTCTTTCT TCTTTCATTA TCTATTACCA GAAAAAGAAC TACTTAAAAA       2280

GCAGTTCTTT TGTCTTTCCC ATTACACTTT CCTTTTCTAC ATGGATGACC ACACCTTTTG       2340

CAATCTGCAA GGAGACCAAG TCATCTTGGA TAGAAATGAT TTTTCCATGA ATTCCAGACA       2400
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1137

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ATAACAACAC TTCATCACCA AATGTTAAAG AAGCTAAATA CTCTTGTCGT TGCTCCATCT   2460

GTTTGCGAAG CAACTTTTGC TGACGAATAG AATGAAAGCT TGACAGTAAA AGGGGACTCA   2520

CTGCCAAGAC AATCACTATT CCATAAAACA ATGTTGTATC CATTAAGCTA TAATCTTAAG   2580

CCAGCTTCCG ATAATTCCGA TGATAACTGT TAAAATAACG AGTTTATATG TTGTCCATTT   2640

CTTTTCTTTG ATCAAGTAGT AAACTAAAAG TGTAAATAGG GCTGGTAGAA GAGCTGGAGC   2700

AACCTTATCA AGCATTCCCT GAATACTTAC GATACTTTGT TTAGCGTCTG CTTTAACTTC   2760

CCCTGCAGCA AAGGTAATCG GCACCATAAT CTTAACAGAT GTCGCTGCCA AACCAGCAAT   2820

TACGtTACAC CGATAATATT GGCAATACGA GAAATCGTTG CCATCTGTTC GCTTAGTTTA   2880

TCAATCACAG TTGTTCCTAG TTTGTATCCA TACAGACCAG TTGACAATTT AATCGCTGTT   2940

AAAATCGTAT TCATCGCAAG GAAGAACAAG ATTGGACCGA CAACCAAGCC TTCTTGAGCA   3000

AACGAAGCTG CGATGGTTGA GAACAATGGA GCTAAACAGA ATTGAGAAAG AGAATCCCCA   3060

ATACCTGCCA ATGGTCCCAT CAAGGCCATC TTGATGCTAC GTGTTTCTTT TGCCGGACGG   3120

CCATTTTCCA ACATTACAAG ATGCAAGCTG GTAATAAAAG GCAGGAAGTG TGGGTTGGTA   3180

TTATAGAATT CACAGTTTTC TTCCAAGGCT TGGTAGAAAC CTTCCTGATC CTCTCCATAG   3240

TGTTTTTTCA AAGCAGGATA CATCACATTG GCATATCCCA ACCCTTGATA GTTACTATAG   3300

TTAAATCCAT TTTGACAAAA GAATGCCCGC AAAGACGTTT TAAGATAATC ACGTTTTGTT   3360

AATTTGTTAG ATCCAGTCAT CGTGTGCTTC CTCCTCTACC ACATGATCCG CTGTTTTTGG   3420

CTTGTTATAA AATTCAATCA AAGCAAAGAT AGTACCTACA ATTGCAATAC CAATTGTTGG   3480

GATGTTTAGA TAAGCTGCAC AAACATATCC CAACAAGACA AAGGGAATCA ACTCTTTCTT   3540

AGCCATCACT GACAAGATCA TCGCAAAACC GATAGCTGGG AGCATTTTAC CAGCAACTGT   3600

CAAACCTGTA AGTAATACCG GTGGAATGTA GTCTACGAGT TTCAACAAGG TATCCATTGA   3660

AAGGGCACCA AGCAACCCAA GGTAAATCCA ATAAAGGCAA ACAACCAAAT TGTTGCATTT   3720

AGAGTGAACT TAAATTTCTT CAAATTATGG TTTTTCAAGT GCT                    3763
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(2) INFORMATION FOR SEQ ID NO: 187:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 5053 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 187:

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                                  1138
CAATCTCTGA GTATGTGCGG TCAATACTAw CAAAGGGAAT yCCTGACGTC AAGTAATGTT        60

CAATTGGmCT ATAGGTAATG GCAACCACTC CATCAACTTT ATTATGACGC AACATCTCCA       120

GATAGTCTTG CTCTCTATTT GTACCATTGA TAGAACATAA GAGTAATTTG TTATTTCTCT       180

TATAGACTTC ATTTTCCACA TGCATAGCAA ATTCTGAAAA GAAGGGATGC CAGATACTTG       240

GTACAATGAT TGCAATCGTT TCTGTTCGAT TTTTTTTCAT TCCTCTAGCG TAGTAATCTG       300

GAATGTAATT CAAAGTTTTA ATCGCTTGTT CCACTTTTTT CAAAGTTACT TCTTTAATGC       360

CTTTTTCTTT ATTAATTACA CGTGAAACAG TTCCAACACT AACTCCTGCT TCTAAAGCAA       420

CATCTTTCAT GGTAATTGAT TTTCTTTGTT CTACCATATT ATCACCTCCT TTCAATATAT       480

AGTATCATGC AAATGCTTTT TAAGCAACTA TTTCTCAATC ATTTTTGGCC AGATCATTTA       540

TCCCATCATG AATAAAATCA CTCCAATTAG CTTTTGAAAA TACTTCAATT TTCATGTGTA       600

AACATCTACA TAAAACAGGA AAAGCCTTGG TTTCATGGCT TTTTTCGTAT CTTCTATAAA       660

AAAAGCAAGA GTTTTAGATG GCTATAAATC TAGATGTACA TTTTGCTTAA ATGATTGAAG       720

GTCTTTTCTT AACAAAAACA CCCCCAAAAT TAGACTTTTT CTGTCTAACT TTTGAGGTAC       780

AGTTCAAACG CGAAATAGCG TTTTTTTGTT ATTTTTGGTT ACTCATCTAA TCGAATAAAC       840

ATCATGGCAT TTAACAAGTA TATGAGTGAG ACCGTGTTTA TATTATTTGA ATAGATGAGT       900

CTCTTATTTT CAATAGGAGG AATAATAAAA TTAGAAATAA TGATATCATA AGGTGAATCT       960

TCTAAAGATT CCTTTGATAA TTCTAATTCA GTCCAAACTT CCAGTTCAAA ATTATTGCTA      1020

CAATAATAAG AAAGTGTCTC TGCAACGAAT TTTGCATGAT ACTGATCAAA ATTACTCATA      1080

ACTAAAACCT TTAGTTTAGG CTGATTTTGT AGCAAATTAA TCACCAAATG TTTGGTATGA      1140

GTGATGAAGG TATAAGATAG ATGATTTACC ATCATTGAAC TAGAACAAAC CTCAAGAGTC      1200

TCTAAATAGT GAGAAAGCTC TTTTTTTATA TCTGAAACAA ATTTTGGAAA AATATTTTGA      1260

AAGTTCCTGA TTGTATTCCC TTTTTGATCA AATAAAATAA ACTCAGTAAA CAACTCTTGA      1320

CGATACAGAT GTGCGGTATT ATGCAGATGC CAAATCAGAT TATCCTTATT CTCCATTTCA      1380

ATCTGATACT TGACTGAAAT CTGATCAATA AAATCACTCA ATAGATGGTA AGATTTTTCA      1440

ACATAACTAT CCTTTTTTAC GCATTTCATA AAGAGACTTT CATCTATGAA AAACATTTTT      1500

TGAAAGTAAG ACACAAATAA TTGGCAAACA ACTTCTTCAT CTAAAGAGAT ATTGTATTCT      1560

GATTCAAAAC TCTGAGCAAC ACCTTCTATT CCTTCTGCCT GCATTAAAAA ATCCAAACTT      1620

TGGTCGTTAA AAGAATCTTT ATCTACTTCC ATAAAATGAC CAAACTTTAT TCTATATAGG      1680

TTCGTAACTA GGAGCAACTT TAGCATTCTA TGCGTTGACA AATTCATTGG AAAGCTTGTT      1740

TCCTTATAAA CCAATTCTAA CAATTGAGAT AGTGGCTCTG ATGAAAAATT TTCAAATGGC      1800
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1139

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CATTCTAGGA AATAATATTT TTCTGAAAAA TATTGTGCAA AAAAGTAACG AATGTCTCTC    1860

TCATTTCCAA TGATTTGAAC AGGGGTCAGA CTAACTTCAA ATTGAAATTG CCTTTTAATC    1920

ACTTTATTGA TTTGGCTAAT AATACGATAG AGCGAAGATG AACTGATATA AAATTCTTTA    1980

CAAATACTCT CAGCTTGACA ACCTTCATTA AAGAAGATGA ATTCTAAAAT CGAAAAATGA    2040

GTTGAATGTT TAAAGAAATG ATGGTAAACC ATTTCAATAT CACTATCATC GGTATTAATA    2100

ATGCGTATAC CATTAGTAGA AGAATGAAAA ATCAAGTCAG GAAAAGCAGA TTTAACATGG    2160

GATAGATCAT CTTTGACTGC ACGTTCTGTA CAATTTAATA ACTCTGCTAG TTCAGAACGA    2220

TGAAACCAAC GTTTATGTTC AAATAATAAT TCTAATAATT CTAATTGCCT ATGACTTTTT    2280

TTAGATAATA AATCTCTCAT GAATATCTTT CTCTCTTTAT AAATTATCGG ATTAAACCTC    2340

TTGCAATTAT ACCACAAAGA ATAGGTATAG CATGATATAA CGACTTTTCC TAAAATCTTT    2400

TATTTCGTAT AATAACACTA CGGAGACAAT ATATAAACAA TTTTCTTATT TTACCGTCTA    2460

TTGAGGGCGT GAATACAGAA TCAAATTCAA GTCTAAAGAT TATATTTTTA ATTTTAAAAA    2520

TTATATAATA GCAACAATTA AAGAATTTGA TTTTTTAAAA TTATATAATA ATAACAATCG    2580

AAATAATTGA CTTTTCTATA TTAAAGTTAT ATAATAGTAA TAATCAAAGA AATTGATTTT    2640

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GCAATCGCTG GAATGGCTTT GCTCCCATCT ATTGTAGGTG CAGCGATTGT GATTACTGTA    2880

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CAAAGAAAAT ATGTTTCATT ATTTTCTGTA TTTTAATCTT GACAATTTTC CTTCCTGTTT    3060

TGATAGATTA TCATCAAGTT AGTGATCTAG GTATTCATCT ACTTAGCTGG AGACAGAACT    3120

CCGTAGTTGA ATTCTATCTT GCTAGATATG TCTTTTGGGG GACAGTGGTT CTATCAACTT    3180

TAGTTTTATT ATCCATTTTA GTTGTGATGT TTTATCCTAA ACGTTACTTG GAAATCCAAC    3240

TTGAAACTAA AAACGATACA TTAAAATTAA AGAATTCGGC AATCGAAGGT TTTGTTAGAA    3300

GTTTGGTGAG TGATCATAGA TTGATCAAGA ACCCAACTGT TCATGTAAAT TTACGAAAAA    3360

ATAAATGTTT CGTTCATGTA GAAGGTAAAA TTCTTCCTTC AGACAACATC GCTGACAGAT    3420

GCCAAATAAT TCAAAATGAA ATAACTAATG GATTGAAGCA GTTTTTTGGT ATTGAGCGTC    3480

AAGTAAAACT TGAAGTTGCA GTAAAAAATT ACCAACCAAA ACCTCAAAAC AAAAAGACTG    3540
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1140

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TTAGTCGTGT GAAGTAAGGA AGTAAAAAAT GGAATGGCTT AAACAATATC GATATCCAAT    3600

TATCGCTGGT CTCATAGGCG TATTTCTGGC TTGTTTGATT GTCTCCTTTG GCTTCTTCAA    3660

AACAATATTT GTATTGATTT TAGGAGCACT GGGAGTTGCA GCTGGATTAT ATATCGAAAA    3720

AAACTATATA GATAAATAAA AAAATAAAAA TTACTAATTT AATTAAAGGA GTTTCATATG    3780

TCAAACGAAA AAAACACAAA CACTAACGTA GAAAAGAAAG ATGCTACTGT TGTAGCTCAC    3840

GAAATCAAAG GGGAACTTAC TTACGAAGAT AAAGTTATCC AAAAAATCAT TGGTCTTTCA    3900

CTAGAAAACG TTTCAGGTCT TTTGGGAATC GATGGTGGTT TCTTCTCAAA TCTTAAAGAA    3960

AAAATCGTTA ACAGCGATGA CGTAACAAGT GGTGTTAACG TAGAAGTTGG TAAAACACAA    4020

GTTGCAGTTG ACTTAAACGT TATTGTTGAG TACCAAAAAA ATGTTCCAGC TTTATATTCA    4080

GAAATCAGAG AAATCGTATC TTCAGAAGTT GCTAAAATGA CTGACTTGGA AATTGTTGAA    4140

ATCAACGTAA ACGTTGTCGA CATCAAAACT AAAGAACAGC ATGAAGCAGA CTCAGTAAGC    4200

CTTCAAGATC GCGTATCTGA CGTTGCTGAA TCAACAGGAG AATTCACTTC AGAACAATTC    4260

GAAAAAGCTA AATCTGGTCT TGGATCTGGT TTCTCAACTG TTCAAGAAAA AGTTAGCGAA    4320

GGTGTAGAAG CTGTTAAAGG TGCAGCAAAT GGTGTAGTAT CTCACGAAAA CACTCGTGTA    4380

AACTAAGATA AAATAAATAT AACAGGAGAA ATTATCATGT CAGTAGAAGA AAAATTAAAT    4440

CAAGCTAAAG GTTCTATTAA AGAAGGTGTT GGGAAAGCCA TCGGTGATGA AAAAAATGGAA    4500

AAAGAAGGTC CAGCTGAAAA AGTTGTTTCT AAAGTAAAAG AAGTTGCCGA AGACGCTAAA    4560

GACGCTGTAG AAGGTGCTGT AGAAGGTGTT AAAAACATGT TGAGTGGCGA CGATAAATAA    4620

GGTTAAAAGT TACTTTATCT TTTTAGTAAT ATTAGTCAAA AGAGTCTGAG TCAAGATGAT    4680

TCTCAGAAAA CAAAAAGCTA GAGATTCCCA ATTGCGGAAC TCTAGCTTTT TAATTTTGCC    4740

TCTTTCTCTT ATTATATTTC AGCAGGTTGT TGGCCATGAG TACGAATCCC ATGTCAATTC    4800

TCACTTGACG CTTACCTCTC AGATGACATC TCTTATAACC CAAACAAACC TTTATCTGCC    4860

CAAAGACAGA TTTCATATCA ATCTTACGTT TAGCGAAAAT TTGTCTACCC TTGGAAGATA    4920

AAAGTGCCTG ATATTCTTTA GTTTTTAAAC ACTGGTAACG TTCATTCATA TACAGTCTCT    4980

TTTGAGGGGC TGATTCAGGT TCATAATCGC AGTCAACATT GATTTCAAGG CTGTTTGCTT    5040

TCTATCTCCC CGG    5053
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(2) INFORMATION FOR SEQ ID NO: 188:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 6492 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

1141

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 188:

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AATTCTCTTT TTTCCAACAA AATGTATGAC CTGCACTTGA ATACTTCTCA TTGTTTGTAC          60

ATTCATCTAC TTTCATATAA TCTTTTACAA AATCATAATA TGACATAACA CACTATCCCT         120

TTTAGACAAT ATTCCAATTA GCCTTATTAA TTCAAAACTA TTGTATTAGT AATTATAACA         180

GATGTATAAT AGAAAAGCAA TGATAGATAT TATCAATTAA GCGAATTTAT ATCTAAAAGG         240

GATATTAAAG AAAGGAGATA TGCTTATGAA GATTTACAAA AAACTATTTG CTTATGTCCA         300

AGATAAGAAA TATCTTGGGG TTTTGGCCAT AATTTTTTCT GCTATATCTG CTGCACTTAC         360

AGTATATGGA TATTATTTAA TCTACAAATT TCTAGATAAG TTAATAATTA ATTCAAACTT         420

ATCCGGTGCA GAGAGTATAG CATTAAAATC TGTTATTACA CTAACAAGTG GAGCGATATT         480

TTATTTTGTC TCAGGAATGT TTTCACATAT CTTGGGATTC AGGCTTGAAA CAAATTTAAG         540

AAAAAGGGaA TCGATGGTCT GGAAAAAGCA AGTTTTAGGT TCTTTGACTT AAATCCATCT         600

GGTCAAATAA GAAAGATTAT AGATGACAAT GCTGCACAAA CTCATCAGGT GGTAGCACAC         660

ATGATTCCCG ATAGTTCTCA GGCAATAATC ACACCCGTAC TTGTACTTGC ACTTGGCTTT         720

ATAGTAAGTA TAAGAGTTGG CATAATTTTG CTTGCTCTTA CTATAATTGG TGGCTTAATT         780

TTAGGGGCAA TGATGGGCGA GCAAGAATTT ATGAAGATAT ACCAAGAATC CCTATCTAAA         840

CTAAGTGCTG AAACTGTTGA GTACGTGAGA GGAATGCAAG TTGTAAAAAT ATTTAAAGCA         900

AATGTAGAGT CTTTTAAAAG CTTTTATAAG GCGATAAAAG ATTACTCAAA GTATGCTTAT         960

GATTATTCCC TATCTTGTAA AAGGCCTTAT GTTTTGTATC AATGGTTATT TTTTGGACTG        1020

ATTGCAATTT TAATTATTCC TATAGTTTAT TTTATGACTA GCTTAGCTAG CGCAAAGGTG        1080

ATTTTACTTG AGCTTATCAT GATTTTATTT TTATCAGGAG TTCTCTTTGT TTCATTCATG        1140

AGAATGATGT GtACTCCATG TATATTTCTC AAGGAAATTA TGCAGTAGAT ACTTTAGAGG        1200

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AGATAGGCGG GATAGCAATA AGTGAATATT CTGACGAAGC CTTAATTAAA GCCATTTCCT        1500

TTGTTTTTCA AGATTCAAAA TTATTCAAGA AGAGCATTTA TGATAATGTA GCGTTAGCTA        1560

ATAAAGATGC GACGAAAGAT GACGTTATGA GAGCCTTAAA ATTAGCAGGA TGCGATTTAA        1620
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1142

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TATTAGACAA ATTCCCAGAA AGAGAAAATA CAATCATAGG CTCAAAAGGT GTTTATTTAT      1680

CCGGTGGAGA AAAACAAAGA ATTGCAATTG CTAGAGCAAT TTTAAAGGAT TCCAAAATTA      1740

TTATTATGGA TGAAGCATCA GCATCTATTG ACCCAGATAA CGAGTTTGAA TTGCAAAAAG      1800

CTTTTAAAAA TCTTATGAAG GATAAAACAG TTATCATGAT TGCACACAGG CTATCTACAA      1860

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ACAAAGAATT AATGTCAAAA GATACAAGGT ATAAGAGCCT GCAAGAGATG TTTAACAGTG      1980

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GACATTTCAC AAACAATCAT GGCTGATATT GAAGGCATAG AGCATGCAAT GAGCCACTCA      2400

ATACCAAAGG TGGGCGGCAT GGTACTGTTT TTCCCATTAA TATCTGTAAT GATGCTAGCG      2460

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GTTCTCTTTA ATCAAAGCGT TATGGAAAAT ATTAGAATCG GTAAGCAAGA TGCAAGTGAC      3300

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AAAGGTTTCG ATACAGTTAT TGGTGAAAAC GGAGCTGAGC TATCAGGAGG AGAAAGACAA      3420
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1143

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AGATTATCAA TAGCCAGAGC CTTCTTAAAA GATGCGCCGA TATTGATCTT AGATGAGATA    3480

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AAAGATAAAA CTGTTGTAAT CATTTCACAT AGAATGAAAT CCATAGAAAA TGCAGACAAG    3600

ATAGTAGTTC TTCAAAACGG AAGAGTAGAA AGCGAAGGTA AGCATGAAGA GCTTTTACAA    3660

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TAGGAGGACT ACAATGGATA ATAAAAAATT AAAAGTAAAA GATTTAGTAA GCATCGGTGT    3780

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ATTGTTCTTA ATATACCCGA CAGTATTAGC CATAGTTGCA GGAACTGTTG TTATGTTATT    3900

TATGGCTAAG GTTCAAAAGC CATGGGCACT ATTTATATTT GGTATGATAT CACCACTTGT    3960

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AGCAGAATTA ATTAGAAAGA TTGGTAATTA TAATTCATTT AAATACAATA TGCTTTCTTA    4080

TGCAATCTTC AGCACATgGA TATGTAGCTC TTTAATGCAA ATGCTTTTAG CAAAAGAAAA    4140

ATATATGGAG TGGTCTTTGA TGACTATGGG AAAAGATTAT GTTGATGTAT TAGAAAAGTT    4200

AATAACTTAT CCTCACATGG CTTTAGTAGC CTTAGGTGCT TTCTTAGGAG GAATTCTTGG    4260

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AAGAATGTAT CCATACCTAT TGCGGTTATG TTTAGATTCT TCCCATCTTT TAAGGAGGAG    4560

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TATCTTGAAT ATGTTTCTGT GCCACTACTC ATTATATCAT CTAATATATC AGATGACATT    4680

GCAAAGCGG CAGAAACAAA GGCAATAGAA AATCCAATTG CCAAGACCAG ATACATTCGC     4740

GTAAAGATAC AGCTAATTGA TTTTGTTTAT GTTTTAGCGG TTGCTGGACT TATTGTGGGA    4800

GGCTTAATAT GGTTGAAATA AAAAATTTAA GTCTTGATTA TGGTGAAGAG CATATATTAG    4860

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ATGGTAAGTC ATCTTTAATA AATTCAATCA ATGGACTAGC TGTAAGGTAT GATAACGCAA    4980

AGACAAAGGG CGAAATAATT ATTGATGGTA AGAATATAAA AAATTTGGAA CTTTATCAAA    5040

TCTCAATGCT TGTTTCAACT GTTTTTCAAA ATCCTAAGAC ATATTTTTTT AATGTCAATA    5100

CGACATTAGA ATTATTATTT TATTTGGAAA ATATCGGTCT TGCAAGAGAA GAGATGGACA    5160
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1144

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GGCGTTTGAA GGATATACTT GAGATATTCC CGATAAAAAA TCTTTTGAAC AGAAATATAT      5220

TTAATCTATC CGGCGGTGAA AAACAAATTC TTTGCATTGC AGCTTCTTAT ATAGCAGGTA      5280

CAAAGATTAT AGTTATGGAT GAGCCTTCAT CGAATTTAGA TATTAAAAGC ATAAGTGTTT      5340

TGGCAAAGAT GCTAAAGATA TTAAAAGAGA AAGGCATAAG CATAATTGTT GCAGAGCATA      5400

GAATTTATTA TTTGATGGAC ATAGTTGACC GTGTATTTTT AATAGATAAA GGAAAGCTTA      5460

AAAAAACTTA TACTAGAAGT GAATTTTTAA AGCTAGATAA AAATGAATTA AATGCTTTAA      5520

GTTTAAGAGA TAAAGAATTA AGTAAATTAA AAGTTCCTTA TTTAAAAGAA GGTGGAGAGT      5580

ATCAGATAAA AAATCTTAGT TACAAATTTA CTGATGATGA GTGTTTAAGC TTAAAAGATA      5640

TTTCGTTCAA GCTTGGGAAA ATTTATGGCA TAATAGGATC CAACGGACGA GGAAAATCAA      5700

CGCTTTTAAG ATGTTTAATA GGTCTTGAGA AAAAATCAAA AGAAGAAATT TATTTTAAGG      5760

GAGAGAAGCT ATCTAAAAAA GAAAGACTCA AAAACTCTTC ACTTGTTATG CAAGATGTAA      5820

ATCATCAATT ATTCACAGAT GAAGTATTCA ACGAGCTTAG ATTAGGAGTA AAGAATTTTG      5880

ATGAAGAAAA GGCGAAAATC ATTTTAAACC CCAATTATTC ACCCCAAATC TAAAAACCAT      5940

CCAGAATCCT TGCCTTAGCT TAGATCCTGG ATGGTTTCTT TTTTCACCCA ATGGGTGTTT      6000

TTTACTAGAC AAAAAAGAGT TTCCCCTTTA TGGTATAAGT GTAGAAAAAA ACACAAAAAG      6060

AAAGGAAACT CACATGAACA GTTTACCAAA TCATCACTTC CAAAACAAGT CTTTTTACCA      6120

ACTATCTTTC GATGGAGGTC ATTTAACCCA GTATGGTGGT CTTATCTTTT TTCAGGAACT      6180

TTTTTCCCAG TTGAAACTAA AAGAGCGGAT TTCTAAGTAT TTAGTAACGA ATGACCAACG      6240

CCGCTACTGT CGTTATTCGG ATTCAGATAT CCTTGTCCAG TTCCTCTTTC AACTGTTAAC      6300

AGGTTATGGA ACGGACTATG CTTGTAAAGA ATTGTCAGCT GATGCCTACT TTCCAAAATT      6360

GTTGGAAGGA GGGCAGCTTG TTCACAGCCA ACCTTATCCC GTTTTCTTTC CAGAACTGAC      6420

GAGGAAACAG TCCATAGTTT GCGATGCCTC AACCTTGAAT TGGTCGAATT CTTTTTACAT      6480

GTTCACCAGC TG                                                         6492
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(2) INFORMATION FOR SEQ ID NO: 189:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 7174 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 189:

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AACTGAAGGT AAAGGCTTCG ACGCAGAACG TGACGCTGCC CAAGCTGCCC TTGATGACCT      60
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1145

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TAAGAAAGCT CAAGAAGACA ACAACTTGGA CGACATGAAA ACAAAACTTG AAGCATTGAA      120

CGAAAAAGCT CAAGGACTTG CTGTTAAACT CTACGAACAA GCCGCAGCAG CGCAACAAGC      180

TCAAGAAGGA GCAGAAGGCG CACAAGCAAC AGGGAACGCA GGCGATGACG TCGTAGACGG      240

AGAGTTTACG GAAAAGTAAG ATGAGTGTAT TGGATGAAGA GTATCTAAAA AATACACGAA      300

AAGTTTATAA TGATTTTTGT AATCAAGCTG ATAACTATAG AACATCAAAA GATTTTATTG      360

ATAATATTCC AATAGAATAT TTAGCTAGAT ATAGAGAATT ATATTAGCTG AACATGATAG      420

TTGTATCAAA AATGATGAAG CGGTAAGGAA TTTTGTTACC TCAGTATTGT TGTCTGCATT      480

TGTATCGGCG ATGGTACCAG CTATGATATC ATTAGAAATA CAAACATATA AATTTGTAAT      540

ACCGTTCATA ATTGGTATGA TTTGGACAGT AGTTGTATTT CTTATGATCA ATTGGAATTA      600

TATAGGCAAA TACTAAGAAG AGACAAAAAT ATATAAATAT TTCTGTACTT ATAGGATATT      660

TAAAATCAAA ATAAAGTTAA TTTACTTATT TGCAGAGGTT GCAACCCAGC CTCTGTTTTT      720

CGATAAAAAG GGACGGAATC TCATTTGTTT GGGTTTTGTC TCATCAATAG AAAGGAACAA      780

AGAGTGTTCG TAACTGAACA CGGGTTTCAG AATTTCTTAC TAAATATAAA AGAAAGGAAT      840

TGAACCCGAC CTAAATGGTG GTTCGATTCA GAACATCAAT AGAAAGGAAT AAGGGTGTTC      900

GTAACTGAAC ACGGGCTATG GACTGTGCCA AAAAGATAGT TTTTTCTAGG ACGTAAGCGT      960

CCGTCGTCAA AACTCCTAGA TGGCTGTGTC CGTTTGACGC CCTTTGTATC TTGAATTATG     1020

AACAATACTG AATTTTATGA TCGTCTGGGG GTATCCAAAA ACGCTTCGGC AGACGAAATC     1080

AAAAAGGCTT ATCGTAAGCT TTCCAAAAAA TATCACCCAG ATATCAACAA GGAGCCTGGT     1140

GCTGAGGACA AGTACAAGGA AGTTCAAGAA GCCTATGAGA CTTTGAGTGA CGACCAAAAA     1200

CGTGCTGCCT ATGACCAGTA TGGTGCTGCA GGCGCCAATG GTGGTTTTGG TGGAGCTGGT     1260

GGTTTCGGCG GTTTCAATGG GGCAGGTGGC TTCGGTGGTT TTGAGGATAT TTTTCTCAAGT     1320

TTCTTCGGCG GAGGCGGTTC TTCGCGCAAT CCAAACGCTC CTCGCCAAGG AGATGATCTC     1380

CAGTATCGTG TCAATTTGAC CTTTGAAGAA GCTATCTTCG GAACTGAGAA GGAAGTTAAG     1440

TATCATCGTG AAGCTGGCTG TCGTACATGT AATGGATCTG GTGCTAAGCC AGGGACAAGT     1500

CCAGTCACTT GTGGACGCTG TCATGGCGCT GGTGTCATTA ACGTCGATAC GCAGACTCCT     1560

CTTGGTATGA TGCGTCGCCA AGTAACCTGT GATGTCTGTC ACGGTCGAGG AAAAGAAATC     1620

AAATATCCAT GTACAACCTG TCATGGAACA GGTCATGAGA AACAAGCTCA TAGCGTACAT     1680

GTGAAAATCC CTGCTGGTGT GGAAACAGGT CAACAAATTC GCCTCGCTGG TCAAGGTGAA     1740

GCAGGCTTTA ACGGTGGACC TTATGGTGAC TTGTATGTAG TAGTTTCTGT GGAAGCTAGC     1800
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1146

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GACAAGTTTG AACGTGAAGG AACGACTATC TTCTACAATC TCAACCTCAA CTTTGTCCAA     1860

GCGGCTCTTG GTGATACAGT AGATATTCCA ACTGTTCACG GTGATGTTGA ATTGGTTATT     1920

CCAGAGGGAA CTCAGACTGG TAAGAAGTTC CGCCTACGTA GTAAGGGGGC ACCGAGCCTT     1980

CGTGGCGGTG CAGTTGGTGA CCAATACGTT ACTGTTAATG TCGTAACACC GACAGGCTTG     2040

AACGACCGCC AAAAAGTAGC CTTGAAAGAA TTCGCGGCTG CTGGTGACTT GAAAGTAAAT     2100

CCAAAGAAAA AAGGCTTCTT TGACCATATT AAAGATGCCT TTGATGGAGA ATAATACTCT     2160

TCGAAAATCT CTTCAAACCA CGTCAGCGTT GCCTTGCCGT ATATATGTGA CTGACTTCGT     2220

CAGTCGTATC TACAACCTCA AAACAGTGTT TTGAGCAGCC CGTGGCTAGT TTCCTAGTTT     2280

GCTTTTTACT TTATAGATTT TTTAAGACTT TCCTAAGTAA TGACGGACGG TAGTGACCTC     2340

CTTCGAAGTT CCATACCTAA ACTTTGAACC TAAGTTTTAA AGTTTCCGGA CAGCTGAAAC     2400

CAAGCTGTTT CAGGTGTTTT CATTACGGCA GAAAGTCTTC GATTTAGTTG TGAAATGGTG     2460

AATGATACTC TTCAAAAATT TCTTCAAACC ACGTCAGCGT CGGCTTGTCA TGGGTATGGT     2520

TACTGACTTC GTCAGTTCTA TCCACAACCT CAAAACAGTG TTTGAGCTGA CTTCGTCAGT     2580

TCTATCCACA ACCTAAAAC GGTGTTTTGA GCAGTCTGTG CCTAGCTTTC TAGTTTGCTT      2640

TTTGATTTTT ATTGAGTATG AATTACCTAA ATTATGATGC ATAGTTGATG GGATATATAT     2700

AATAGATTGA AATAGAATAT GAACAAATTG ATAAGAGGAT TTTAAAGTAA TCTCTAACAA     2760

TGCTTTAGAA ACTATGGTGT GCTATTCTAA ATTCAATTCA CTATAACTTG TTTACGTTTT     2820

AAAAAAGAGC CGTCGGGCTC TTTTTACTTA TCTTCAGTTC CCTGCATTTC TTTTATCACA     2880

GCTAGTCTAG TCTGGATATC CTTTTCCAAG ACCTTAAACT TGTAAGTCAA GTCTTCTTGG     2940

TATTCCTTGA TAAGTTCTTT TTGCTGGTTA ATGATTTGCA GGCTGTTTTG GATAATATCC     3000

ACATCGTCCT TGATAGCTTG AACGCGGTCA GTGGTATTCA AGACTTCATC TGTGATGGTT     3060

TGGCGATTTT TTGTAACCAG ATAACTTCCG GCTGCAGCTC CTGCAAATAG CAGTAGGTTG     3120

GATAATTTCA TAGCAACTCC TTAAGCGTTT TTGATGGTTT CAGCGACTTG AGCAAGTTTG     3180

TCAAAGTCTG GTTCGTGGGC GATAAAATCA ATCTTGAGGC CATCGTCAGC ACTGTAGCGA     3240

GGCACAAGGT GAACGTGAGT ATGAAAAACT GTTTGACCAG CGACTTCTTC ACAGTTGGAA     3300

ATGATATTCA TACCAGCAGC CTTAGTGACT TTCATGACTT TTTGAGCTAC TTTTGGTACT     3360

TGGGCAAAGA GTTGGcTGGC GCTCGTAGCA TCCATCTCCA AAAGATTGCG ATAGTGTTCT     3420

TTTGGCACGA CCAAGGTGTG TCCTAGTGTT ACTTGAGAGA TATCAAGAAA GGCAAGGACC     3480

TGCTCATCTT CATATACTTT TGAAGCAGGA ATTTCCCCTG CGATGATTTT ACAAAAAATG     3540

CAATCTGACA TAAAATCTAC CTCTACTGTA CTGAATTTTG ATATAATATA GCTACATTAT     3600
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1147

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ACCAGATTTG GAGAAAATAT GTTAGAAATT AAAAACCTGA CAGGTGGCTA TGTTCATGTT   3660

CCTGTTTTGA AAGATGTGTC CTTTACTGTT GAAAGTGGGC AGTTGGTCGG TTTGATTGGT   3720

CTCAATGGTG CTGGGAAATC AACGACGATC AATGAGATTA TCGGTCTGTT GGCACCTTAT   3780

AGTGGCTCCA TCAATATCAA TGGCCTGACT CTGCAAGGAG ATGCGACTAG CTACCGCAAG   3840

CAGATTGGCT ACATTCCTGA GACGCCTAGT CTGTATGAGG AATTGACCCT CAGAGAGCAT   3900

ATCGAAACGG TTGCTATGGC TTACGGTATT GAGCAAAAAG TGGCTTTCGA ACGAGTAGAG   3960

CCCTTGTTAA AAATGTTCCG TTTGGAACAG AAATTAGACT GGTTCCCTGT TCATTTTTCA   4020

AAAGGGATGA AGCAGAAGGT CATGATTATC TGTGCTTTTG TGGTGGATCC AAGTCTTTTC   4080

ATCGTGGATG AGCCTTTCCT TGGTCTTGAT CCGCTGGCTA TTTCTGATTT GATTCAGCTT   4140

TTGGAAGTGG AGAAGCAAAA GGGCAAGTCT ATTCTCATGA GTACCCACGT GCTGGATTCG   4200

GCGGAGAAGA TGTGTGATGC CTTTGTCATT CTTCACAAGG GAGAGGTGCG TTCCAAAGGC   4260

AATCTCCTGC AACTACGTGA AGCCTTTGAT ATGCCTGAGG CTAGTTTGAA TGATATTTAC   4320

TTGGCTCTGA CCAAAGAGGA GGATCTATGA AAGACTTGTT TTTAAAGAGA AAGCAGGCCT   4380

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TGCTTGTCCT GTTGGGCTTT CTAGCCTACC AGTACAGTCA ACTCTTACAA CATTTTCCTG   4500

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CCAGCAAATT TTTCACTGAA ACTGGACTGG ACTGGGACTA TGTTATTTCT CAAGAAAGCA   4860

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ACAGCGTTAA GCGTCGTGCC TATCTGGACT TTATTTTAAA GGCTGTTCAG AAGGTGCCTG   4980

GGAAGATTTG GCAAAATCTC TATCTGCGTT CTTATCTGCG AAATGGCGAC CTCTTTGCTC   5040

TCAGTCTTCG TCTTCTCTTG CTTTCCTTGC TGGCGCAGGT TTTTATCGAG CAAGCTTGGA   5100

TTGCGACAGC AGTGGTAGTT CTCTTTAACT ACCTCTTGCT CTTCCAGTTG CTGGCCCTCT   5160

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AAAAAGGCTT ACAGGAGGTA GTTCGAGGAT TGACCAGTTT TGTTTTACTT GTGGAATTAG   5280

TTGTTGGGTT GATTACCTTC CAAGAAAAAC TAGCCCTTCT AGCCTTACTA GGAGCTGGTT   5340
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                                  1148
TGGTTTTACT  AGTCTTGTAT  TTGCCTTATC  AGGTAAAACG  TCAGATGCAG  GACTAACATT      5400

GCTGATACGA  CACTAAAAAA  GAAGTTGAGT  TCAGTCTGTC  TCAACTTCTT  TTTTGTTACT      5460

ACAGGATAAT  GGTTGGTCCG  TAGAGACTTA  TACTCTTCGA  AAATCTCTTC  AAACCACGTC      5520

AGCGTCGTCT  TACCGTACTC  AAGTACAGCT  TGCGGCTAGC  TTCCTAGTTT  GCTCTTTGAT      5580

TTTCATTGAG  TATTAACTTG  GTCTTGACTT  GGTCAAAGTG  GAAGCGGTCA  TAGGCCCGCC      5640

AAGCGGCGCG  AGTTGGAGCA  TCTGGATCAA  GAGCGCTGAG  TCCCATGAGA  AGACTGGAAG      5700

TCTGGTAAAA  TTTTTCTAGT  TCAATCAAGA  ATCGATTATC  CACTGTTTCA  GCCTTGGCTA      5760

GAAAACCAAG  AATAGAGTTT  AATTGCTCCT  GAAAGCGGAC  GTCGTCAGCG  CTTGCCTGTT      5820

TGCATGCTTG  GTAGGCTTTG  TTTAAGTCAG  TAATCAAAGT  ATGAGCTCTT  TTGATGGGGT      5880

CTGTATCTGT  CATGGGAATG  CCTCCTTTAA  TCTGGGTGCC  AGTCTTACTT  CTGGCAACTG      5940

TGTTTTGATA  CTGTTAGTTT  ATCACTTTTA  ATTCTTTTTT  TTTATTCAAA  TCTTTAATTG      6000

TCATTGAAAT  GTCTTGAATT  GCGCTGAGTG  AATTTTATGA  TAAAATAGTT  GTAAGCTCAT      6060

CATGATGTTG  TAGAAAATAA  TCCTTTTAGG  AGTTTTCAAA  GACTGTTTAG  GATTGGGTGT      6120

GCTTGGGCTA  GACCTTTTCT  GTTATTCTTT  TCTTAGGAGG  AGAATCCAAT  GAAATATATG      6180

ATTATTCAGA  CGCAGAAAAC  AGTCTATAAA  GTAAACATCG  ACGATATCTA  CTATATCCAA      6240

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AATTGTTTGG  TTAATCTTGA  TAAATTAAAA  TCGATTGATT  TTCAAGAAAG  AATCCTTTTT      6420

CTCGGAGAAG  AAGGTCAATA  CGCTGTCAAG  TATGCCGAC  GTCGCTATAG  AGAAATTCGT       6480

CAAAAATGGT  TGAAAGAGGG  AGAGTAAGAA  GATGAGAATA  TTTGTTTTAG  AGGATGATTT      6540

TTCCCAACAG  ACTAGAATTG  AAACGACGAT  TGAGAAACTT  TTGAAAGCAC  ATCATATCAT      6600

TCCTAGCTCT  TTTGAGGTAT  TTGGCAAGCC  GGACCAACTG  CTGGCTGAAG  TGCATGAGAA      6660

GGGGGCCCAT  CAGCTATTCT  TTTTGGATAT  TGAGATTCGA  AATGAAGAGA  TGAAGGGACT      6720

GGAAGTGGCT  AGAAAGATTC  GGGATCGGGA  TCCTTATGCC  CTGATTGTCT  TTGTGACGAC      6780

TCACTCGGAG  TTTATGCCCC  TGTCTTTTCG  CTACCAAGTG  TCTGCTTTGG  ACTACATTGA      6840

TAAGGCCTTG  TCAGCAGAGG  AGTTTGAATC  TCGGATCGAG  ACAGCCCTCC  TCTATGCCAA      6900

TAGTCAAGAT  AGTAAAAGTC  TGGCGGAAGA  TTGCTTTTAC  TTTAAATCAA  AATTTGCCCA      6960

ATTTCAGTAT  CCTTTTAAAG  AGGTTTACTA  TCTCGAAACG  TCGCCCAGAG  CCCATCGTGT      7020

TATTCTCTAT  ACCAAGACAG  ACAGGCTGGA  ATTTACAGCG  AGTTTAGAGG  AGGTTTTCAA      7080

GCAGGAGCCC  CGTCTCTTGC  AGTGCCACCG  CTCTTTTCTC  ATCAATCCTG  CAAATGTGGT      7140
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1149

GCATTTGGAT AAGAAAGAAA AACTGCTTTT CTTT   7174

(2) INFORMATION FOR SEQ ID NO: 190:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3207 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 190:

CCACCAGGGA AAATCATTGA AGTTGGTAGT CACCAAGAGT TAATGCAGGC GCAAAGTTTC   60

TACCATCATC TATTCAATAA ATAAGGAGAA TGTCATGAAT CCTAATCTTT TTAGAAGCGT   120

CGAGTTTTAT CAGAGACGTT ACCATAACTA TGCGACAGTG TTAATTATAC CTCTTTCATT   180

ACTATTTACT TTCATCTTGA TTTTCTCCCT TGTTGCCACA AAAGAAATTA CTGTTACTTC   240

CCAAGGAGAA ATCGCCCCTA CAgTGTCATT GCCTCCATTC AGTCAACCAG TGATAATCCT   300

ATCCTAGCTA ATCATTTAGT GGCAAATCAA GTAGTTGAAA AAGGGGACTT ACTCATCAAA   360

TACTCTGAAA CAATGGAAGA AAGTCAGAAA ACTGCCTTAG CAACTCAATT ACAAAGACTT   420

GAGAAGCAAA AAGAAGGACT TGGAATTTTG AAACAAAGCT TAGAAAAAGC GACTGATCTT   480

TTTTCTGGCG AGGATGAATT TGGCTACCAT AATACCTTTA TGAATTTTAC TAAACAATCC   540

CATGATATTG AACTGGGTAT CACAAAGACT AACACCGAAG TTTCAAATCA AGCTAATCTT   600

TCCAATAGCA GTTCATCAGC TATTGAACAA GAAATTACAA AAGTTCAACA ACAAATTGGA   660

GAATATCAAG AGTTGAGAGA TGCTATCATA AATAACAGAG CACGCTTACC AACTGGCAAT   720

CCGCACCAGT CAATTTTGAA TCGTTATCTT GTAGCCTCAC AAGGACAAAC ACAAGGAACT   780

GCAGAGGAGC CATTTTTATC TCAAATTAAT CAAAGTATTG CAGGTCTTGA ATCATCTATC   840

GCAAGCCTCA AAATTCAGCA AGCTGGTATC GGAAGTGTAG CAACTTATGA TAACAGTTTA   900

GCAACCAAAA TTGAAGTACT CCGCACTCAG TTTTTACAGA CAGCCTCACA GCAACAACTA   960

ACTGTGGAGA ATCAATTAAC AGAATTAAAA GTACAACTAG ATCAAGCCAC ACAGCGTTTG   1020

GAAAACAATA CCTTAACCTC CCCAAGTAAA GGTATCGTTC ATCTGAACAG CGAATTTGAA   1080

GGTAAAAATA GAATTCCAAC TGGTACAGAA ATTGCTCAAA TATTCCCTGT CATCACAGAT   1140

ACAAGAGAAG TACTAATCAC TTACTACGTA TCTTCTGACT ATCTACCTCT ACTAGATAAA   1200

GGACAAACTG TAAGATTAAA ACTGGAGAAG ATTGGAAATC ACGGCACCAC CATCATCGGC   1260

CAACTTCAGA CAATTGATCA AACTCCTACC AGAACAGAGC AAGGAAATCT CTTTAAATTA   1320

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                                1150
ACCGCTCTTG CAAAACTATC TAACGAGGAT AGTAAACTCA TCCAATATGG CTTACAAGGT    1380

CGCGTCACTA GTGTAACTAC AAAGAAAACA TATTTTGATT ATTTCAAAGA TAAAATTTTA    1440

ACACATTCTG ATTAATTTTC AGATAACACT CTATAACTAT TTATTATCTT ATCAAAAAGG    1500

AGAATCATAA CATGGATAAG AAACAAAACC TAACTTCATT TCAAGAACTA ACAACTACCG    1560

AACTCAATCA AATTACAGGT GGAGGATTGT GGGAAGATTT ATTATATAAC ATTAATAGAT    1620

ATGCTCATTA CATCACATAA GAACTTCATC ATCCAATACA ACTATAAAAA AATAAGACCG    1680

AGAAACAAGT ACTCTCGGTC TTATTTTTCA TCATTCTGTA TGTATCACAG TAAGTACCTG    1740

ACGAAAGACT TGATTTTGAC AGGTGGTATT TAGACTGGTA TTAGGATGGC TTTCCACAAT    1800

CTTCATGACG GTATAGAGAC CAACTCCTCT CTCCTCCCCT TTAGAACTGG CTCCAAAGGA    1860

GAAGATTTCA GAAATATCGA TGCCCTCTTC TTTGATGGAG TTTTCGATGA TAAAGGTCTC    1920

CTGTGCTCCA TTTTTTAAAA AGGCGATTGA AACATGAGGT TGACTAGCTT CCACACTGGC    1980

TTCAATAGCA TTGTCACAAA GGATAGACAC AATGGTTAGA AAATCAAGTA GACTCATCCC    2040

CTCGACCTGA ATCTCCTCAG GAACTTCGAC ATTAAAGACA ATGTTCTTAT CTCTGGCTTT    2100

TAAAAATTTC CCTGCTAGAA GACTTTTGAG GGCTTTATCA CGAATATTTA CCAATCTGCC    2160

CAGGTCATAT TTATTGTTCT GCAATTTCTG ACTGGAATCC TTTAAGACGG AGCCATAGAC    2220

CTCTTTTATC TGCTCCATAT CCTCCTCTTC AATGCCCAGA CGTAAGCTAG TCAAGAGGTT    2280

GGTATAATCA TGACGAAAGC TCCGTACTTC CTTGTAAAGC TCCTCTATAT GCCGACTATA    2340

GCGTTCCATA TCTCTATAGC GCAGGGCCTG CTCTTGTTCC AATCTCTCAT AGAGTTTTTC    2400

CTTCAAATAG GTATCCAATT TCTTGATAAC CCCCATAAAA AAGAGTAGGT AAAAGACTAG    2460

GATGAGATGG CGAACAGTCT TTGATTGAAT ACTTGTTCA TATTCAAAAA AAGACAGACT     2520

TTCCATGACT AGATAGTAGC CACCCATTAT CCAGTTAATC TGAGTCAGGG ACTTTTGAAA    2580

GGCTTTATCG AGAATCTCCT TTCTCAAGCT AGTAAAATCG TAGTCCAACC ATTTCAAAAA    2640

AGCTAGAGAA ATGAAGAAAT TGAAAATTAT TATACATAAC CCAGTAAATG AGTAGCCATC    2700

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CAATAATAAG AAAGATAAGC CTATGCCGTA CAAGGGTTCC ATAAAATAAG ATAGGTAAAC    2880

ATTTCCTACT ATATAGCTAA TCATCACAAA AACAAAGGCC AACAGTATCT TCAAAAGAAA    2940

GGCCTTAAAA ATCCTCTCGA AAGTAAGATC AATTCCATCC ACCTTAAAGA AGATGACAAT    3000

TTCTAGTCCA TTAGTAACAA GTGTATACAA CAATATCCAA GCAATGTTCA TAAATTCTCC    3060

TAGCTCAGTG TAATTTATTG ATGGCCTCAG ACACTTCCCT GACCTTATAA CGGGCGATTA    3120
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1151

GACAACTTCC ACCATTGGGA GAGAAGAGCA GTTTTTCTTT CTTATCCAAA TGCACCACAT　　　　3180

TTGCAGGATT GATGAGAAAA GAGCGGT　　　　　　　　　　　　　　　　　　　　　　3207

(2) INFORMATION FOR SEQ ID NO: 191:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 10357 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: double
       (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 191:

CTGAATCAAG TGTACTGCAC CAGTTCGTGC ATCAGGCATA ACAACATCTA CAGATATAAT　　　　60

ATTGTTTTCT GAGTCCGCCT CATAAGTTAA AATCATAAAT TTTTCGATAT TCGAATTTTT　　　　120

AGTAGCTTGT TCAATTTCTT GAATCATTTC ATCAGAAACT AACTCCATCT GAATTGGAAA　　　　180

GGAATGACTA TTTTCATCAT TTTTGTAGGA AGAATGTTGA TTAAGATAAA GTGTATTCAT　　　　240

CTGAGCATAT TCAAATAAGT AGCCACTCTT ATTTTTTTGT ACCAAAGGAA ATTGGTTTGT　　　　300

AAGTCGCTTC TTACCCTTTA TAATTAACAA TACTTTCCCA TATTTTTCTG TATTTGTTTC　　　　360

AAATTCTAAA TATCCCCAAG TCTGTCCTGC TAATTGTAAT TTATACTCAA ACAAATCTGC　　　　420

TGATGCAAAT GCAGTATCAA TATGATTAGG TCGCGTCCAT GCATAACCAT TCGACACTAT　　　　480

CATTGTCTCT CTTTTTTCTA GACGTTCATC TACATAATCT TTTTGCCCTT TCATCAAAGT　　　　540

ATCTACAATT TTTTGTGCCT CAAGCGAATC AAAGAGATCC TGATTCAACA TAATTCTTCC　　　　600

TCCTCCAAAT ACTTTTTAAT GAATTATACC ATTTTCTTAA AGAAATTACT ACAATAATTA　　　　660

TCTTTTTCTT AAAGTTCTGT GTCAGAGTAA TTTAGAAAAT TATATCTTCT ATAGTAAAAT　　　　720

CAATTAAAAA CTGAACAAAT TTATTGGGAA ATTCAAATCG CTTTCTGAAA ATATTTTAGG　　　　780

AACCGTAGTG TAATATTCCA GATTCAATTC ACTATAAAAC TGACCTTTCT CCTGCAAAAG　　　　840

AAAAAGGAAA GACTTCCTTT CGTGCCTTTC CTCTTACTTG CTACTTGTTT GATTATTTTT　　　　900

GGTAAGCTAC TGCTTGTCTG ATAAAATCCT GAATCGGCTC TCCTTGGTGG AGAGCTTTTA　　　　960

CTATTTTCGA ACCGACGATA ACACCATCTG ACACCGCATT GAAGCGTTCC AGATCGGCTT　　　　1020

GACTAGATAC ACCAAAACCT GTCAAGACTG GGATGTCGGC CACTTGATGA AGTTGCGCCA　　　　1080

AGTGCTTGTC CAAATCTGCA CGGTAATTGC CTGATTTCCC TGTCACTCCA TTGATGGCAA　　　　1140

CGGCATAGAT GAATCCCTCC GCCCCTTCAA TCAACTCTTT CTGGCGCTCA ATTCCTGTGG　　　　1200

TCAAGCTTAC TAAAGGAATC AAGGCGATAT CTGTATTTGC CAAAAATGGT TCTACAAAGT　　　　1260

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                                 1152
.TGGCATGTTC ATGAGGCAGG TCTGGGATAA TCAAGCCCTT CACAGCTGTA TCAGCCAGAT    1320

CTTTGACAAA GTTCTCCACA CCGTACTGAA AGAGGGGGTT GAAGTAGGTC ATGATGACCA    1380

GTGGAATCTC TGTTTCAATG GTTTTCAAGG TTTCAACTAA AGCCTGGGTA GAGGTCCCGT    1440

GGGCTAAACT GCGCAAGCCA GCTTCTTCGA TAACAGGTCC ATCTGCAACA GGGTCTGAAA    1500

AGGGAATACC CACTTCAATT GCAGAGACAC CCAAATCTTC TAAAAAGTGA ATTGTTTCAG    1560

CAAGACCGTC CAAACCTTTC TCGTGGTCAC CAGCCATGAT ATAGGGAACA AAAATTCCTT    1620

TTCCAGCTGC TTTAATAGCA TTTAATTTTT CTGTTAGTGT CTTAGGCATG AGCTTCTCCC    1680

TTCTTTGCTG CATCTGCTTC CAAGCGGTCC TTGACTTGAA CCACATCCTT GTCCCCACGA    1740

CCTGATAGGC AGACAATCAT AGACTTTTCT GGTCCAAGTT CTTTGGCCAA TTTCACCGCA    1800

AAGGCGATAG CATGGCTAGA TTCCAAGGCT GGGATAATCC CTTCCACACG AGACAAGAGT    1860

TGGAATCCTT CCAAGGCTTC TTCGTCTGTC ACAGGGACAT AGCTGGCACG TTTAATATCG    1920

TGGTAGTGAG AATGCTCTGG ACCGATACCA GGATAGTCCA AACCTGCTGA GATAGAGAAG    1980

GCTTCAAGAA TTTGACCATG GGCATCTTGG AGCACATCCA TGAGGGAACC GTGAAGGACA    2040

CCTGGACGAC CCTTGGTCAA GGTAGCTGCG TGGTGCTCTG TATCCACACC AAGCCCTGCT    2100

GCTTCAGTTC CATACATAGC TACTGACTCA TCTTCTACAA AGGGATGGAA GAGCCCGATA    2160

GCATTCGACC CACCACCAAC ACAGGCTACT AGGGCATCTG GCAGATCTCG ACCTGTCAAG    2220

TCACGGTACT GTTGTTTAGC CTCTCGACCG ATGACACTTT GGAAGTCACG AACGATTTCT    2280

GGAAATGGAT GAGGCCCCAA GGCAGAACCA AGGATATAGT GGGTATCGTC GATATTAGCC    2340

ACCCATGAAC GAAGGGCTGC ATTGACCGCA TCCTTGAGCA CGCGCGAACC ATCTGTTACA    2400

GCCTCGACCT TGGCTCCCAA AAGCTCCATG CGGAAGACAT TGAGGGCTTG GCGTTTGACA    2460

TCTTCCTCAC CCATGTAGAT GGTACATTCC ATGTTAAAGA GGGCTGCAGC AGTTGCAGTT    2520

GCCACACCGT GCTGACCAGC ACCCGTTTCT GCGATAATTT TCTTTTTACC CATGCGTTTG    2580

GCAAGCCAAA CTTGTCCTAA GGCATTGTTA ATCTTGTGGG CTCCTGTATG GTTAAGGTCT    2640

TCCCGTTTGA GATAAATCTT GGCTCCGCCA ATATGCTGGG TCAAGTTTTT TGCGTAATAA    2700

AGAGGAGTTT CACGTCCTAC GTACTGGCGC AAAAGCTGGT TTAATTCCTC TTGGAAACTT    2760

GGGTCTGCCT GACTTTCACG GTAGGCCTTC TCCAACTCCA AAACTGCTGT CATCAATGTT    2820

TCTGGGACAA AACGTCCGCC GAATTTTCCG TAAAATCCAT CTTTATTTGG TTCCTGATAT    2880

GCCATGCTTT ACCCTCTCTA TAAATCTTCT AATCTTTTCA TGATCTTTTT GTCCATCTGT    2940

CTCCACTCCG CTCGATACAT CTACTGCATA GGGAGTAAAG TGTTGAATTG CTTTTACTAC    3000

ATTATCTTCA TTAAGGCCAC CTGCGATAAA GAAGGGCTGT GCTAGTCCAG TCGTATCCAG    3060
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1153

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TTGACCCCAA TCAAAGGGCT GGCCACTTCC TGCCACAGGG GCATCAAAGA GTAGATAATC      3120

TGCCTGAGAA TTGGGGACAT GCCCATTTCC ATCTACCTGC ACAGCCTGAA TACTGGCACA      3180

AGGCAAATTC TCAAATAAAT CATCTGCCAC CTGACCGTGA ACTTGAACCA AGTCCAAGCC      3240

AACTTTGTCA ATCGCTTCCA GCAGTTCTAC CCGACTTGGT GAAACAAATA CTCCAACCTT      3300

TTTCACATCT GCAGGAATAA GCTTTGCCAA CTCAGCTGCC TCTTCTAAAG TCACCTGTCT      3360

TTTACTAGGT GCAAAGACAA AACCGATATA GTCGGCTCCT GCTGAAACGG CTGTTTCCAC      3420

CGCTTCTTTG GTCGATAGTC CACAAATTTT AACCTTTGTC AATCTGCAAC TCCTTGATTC      3480

TCTGGGCCAC ATTTTCTGCC TGCATAAGAG CTGTCCCTAC CAAAATTCCG TTAAAGTATG      3540

GGGCTAGTCG TTCCGCATCC TGCCCTGTGA AAATGGCAGA TTCAGAAATG TAATAGCGAC      3600

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TGCGAGCGCG GATGATTTGC TTTTCATCGA TGATAAAGTC TTTGTTGAGC GTCGGAATCT      3900

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TCAACACCGA AATCATCACT GCTCCGTTTT CTTCATAAGT CTGGGCCTGT TGCACAATAT      4020

CCACATCGAG ATTGATATCT CCCAAACTAG GGCTAGCTTT CTTGACCTCA GCGATTACCT      4080

GCAAGCGGTC CTGATGATTC TTCAAAAATT CTGCCAAGCG ATAGGTCTGG CGCAGAGGCT      4140

GGATTTGCTC CAGCTTCATC TGCTCCACCT CACGCGCCTT CTGCTCTAAG ATTCGTGCTA      4200

AAAATTCCTG ACTCATTTTT GGTACTCCTG TAACAGTCTG AGTTTTTCAA GGGCCTTGCC      4260

TCTAGCAATC ACTTGACGGG CCAAGGCAAC CCCTTCCTTG ATGCTATCAA TCTTACCATT      4320

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ATTTTCAAGA AGTGCAATCT TGGTTGTTCC GTTCAAGCCA GCTTCATCCA ACCCTTCTGG      4560

TCCAGCAACC ACGATGGCAC GTTTGCGACC CATATTTTTC AAAACCTGAG CTGTACTTTC      4620

TAGGAGTTCT GGACGACTAA TTCCAAGAAG CTGTGTTTCT AAAGCCATTG GATGAATCAG      4680

TGGACCAGTC AAGTTCATAA TCGTTGGAAT TCCCAATTCC AAACGAGCTG GCATGATGTA      4740

TTTCATAGCT GGGTGCATAT TTTTAGCGAA GAGAAAGACG ATTCCAGTTT TATCAAAGAC      4800
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1154

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CTTACCTAGT TCAGCTGGTT TGAGGTCAAG ATTGATTCCC AAGGCTTCGA GGACATCTGC    4860

GGAACCAGAT TTAGAAGATA TCGAGCGGTT ACCGTGTTTG GCCATGTGAA TACCGCCACC    4920

AGCCAAGACA AAGGCTGCAG TTGTGGAAAT ATTAAAACTG AAAGACTTGT CCCCACCTGT    4980

ACCACAGTTG TCCATGGCAT CATGAATCTC AGTTGGAATA TGCTGGGCAT GTCCTCTCAT    5040

GACTTGGGCA ATGGCTGTGC GTTCTTCAGG TGTTTCCCCC TTCATCTTAA GAGCTAAGAG    5100

GAGAGAAGCA ATCTGCGCTT CAGTTACACG CCCAGTTACG ATACGCTCAA TGACATCCGT    5160

CATTTCCACA CCTGATAAAT TTTCAAATTT TGCTAGTTTT TCAATAATCT CTTTCATCCT    5220

AGTTTCCTCA CTTTACAACC TCCTCGATAA AATTCCGAAT AGAAGACAAG CCGTCTGGCG    5280

TTCCAATGCT CTCTGGATGG TACTGGAAGC CATAAATCGG TAGGTTTTTA TGTTGAATCC    5340

CCATGATGGC TTGGTCATCA GTCGAACGAG CTGTCACTTC AAAGTCTTCT GGCATTTCCT    5400

CAATCAAAAT ACTGTGATAA CGCATGACCG CACGGCCATC CTCAATACCT TGATACAAAA    5460

CAGATGGCGC TTCAAAGTTG ATATTGCTCT GTTTCCCATG CATGACTTTT GGAGCCAAAC    5520

CTAGCTTACC ACCAAAGACT TCTGCAATGG CTTGGTGGCC CAAACAAATC CCAAGAATCG    5580

GCTTCTTGCC TGCAAAATCA CGAATCATGT CTTCCATCTT TCCAGCATCA ACTGGCCAAC    5640

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AGATTTTGCT TTGTTAATGG TTTCTTGGTA TTCGTTTTGG GCGATAGAGT CGTAGACAAT    5880

CCCTGCCCCA GCCTGCACAT AGGCTCTTTG ATTTTTGAGA ATCATGGTTC GGATGGCGAT    5940

GGCCAAATCC ATATCACCCG TCGCAGACAA GTAGCCGATT GCCCCAGCGT ATACTCCCCG    6000

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GGTTCCAGCA GGAAGCGTTG CTTTCAAGGC ATCCATGGCA GTGAGTTCTG GAAGCAAACG    6120

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AGTGACTTGG ACACTGGTCG TTTCAGAGAT GCGGCCAATA TCGTTACGCC CCAAGTCTAC    6240

CAACATTCGA TGTTCTGCTG TTTCCTTCTC ATCAGAGAGG AGGTCAGTCG CCAAGGCCTT    6300

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GCCATTTTTG ACAGAAACCA AACTTTCTGG ACTAGCTCCG ATGATTTGAT AATCCCCAAA    6420

ATCATAGAAA TAAAGGTAAT TAGAAGGATT AGTCACGCGG AGATTTCTGT AGAAGTCAAA    6480

TGGATTTCCA GTAACTTCTG CTGAAAAACG CTGGCTGAGT ACACATTGGA ACATATCTCC    6540

GTTACGAATC AAGTCACGAG CTGTTTCTAC CATTCCCTCA AACTTATGTG GAGCGATATG    6600
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1155

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CGGTTTGAAG TCTAACGGAG ATAGATCCAA ATCTTCAAAT TCATTTGGAG CAGGAATGCG          6660

TAATTCCTCA AGCACTTGGT TCAAGGATTT TTCCAAGGCC TCTTGACTGC GCTCACTATA          6720

AAGTGCATCC TCTATGACAT GTATCTTCTC CTTCTTGTGG TCAAAGACCA TATAGCTCTC          6780

ATAGACAAAG AAATGCATGT CTGGCGTCCC AATTGTATCC TCAGGGATTT GACCAATTTC          6840

TTCATAAAGC GAAATCATAT CGTAACCCAC AAAACCAATG GCTCCACCAC CAAAAGGTAG          6900

CTCTGAGTGG TGCTGACTCT TATGAATCAC TTCATAAAGG AAATCCAAGG GATCCCGATC          6960

AATCACTTGA CCATTTTGAT AGAGAACCCC ATTTTCAAAC TTAATCTCAA AAACTGGATT          7020

ATAGGCTAGG ATAGAAAAAC GAGCTGTTTC CTTGTCTCTC GGAATACTCT CTAAAATAAC          7080

CTTATGTTGC CCCTTTAAGC GCATATAAGC CAAGATTGGT GATAAGACAT CTCCATGAAT          7140

GATTCGTTCC ATTGTAATTT CCCTTTCAGT TCTACTTCTA GTCCGTGGTG ACTGTATGAA          7200

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GATTTCTCCT ATCTCTCATT CCTGTCTCAG ATATCTCCTG TAACAGGCTG TGCGATAAAG          7320

GGCACTCCCT TGAGAATGAT GTTTTCTTCT CTCGTTTCAG ATGAACCCAA CTTTACAGCT          7380

TTCTCTGCTT GTTTTCAGCA ACCACAAGCT CTCTGTGAGA GAAAGAACTG TAATTTTTCC          7440

ATCTATTATT TTTTAGCTTC TAGTAGTCTG CAATCGCAGC TAGGTCCTTG CCTCCACGAC          7500

CAGAGACATT GATGAAGAGA TGTTCATCTC GGTACACCTT TATACTCTTC GAAAATCTCT          7560

TCAAACCGCG TCAACGTCGC CTTGCCGTAG GTATGGTTAC TGACTTCGTC AGTTCTATCT          7620

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TCGTCAGTTC TATCCACAAC CTCAAAACAG TGTTTTGAGC AGCCTGCGGC TAGTTTCCTA          7800

GTTTGCTCTT TGATTTTCAT TGAGTATTAC TAGCTTTTTT CGTATTAGTC CAGCCTTTTT          7860

GTTTGCTTTT AGTAGTAGGC ATGGAGCTGT AGATAGAACT CAAGTTCATC AAAGCGACTT          7920

AAGGCCCTAA TAAAAGATAA ACCAAACGAC GGATAGAAAA AAGCCCACAC ACAGAATATA          7980

CTTCCGTGTG AGGGCGTTGG TAACGCGGTG CCACCTCAAT TATAAAGGGA CTATCCCTTT          8040

ACATCTCTGC CTTGTTTAAC AACAAGCTGC ACTGTAAGGT GTGCGCACCG AATTTTCATT          8100

GTTTCAAATT CATTTTCAAA ATCAGCCCAC TTTCACTACT TCCAACCACC TATTCACAAT          8160

CACCACAGGC TCCCTGAAGA TCAAAAATAG TTACTTTTCT GATTTGTTGA ACTTATTTTA          8220

ATACTTTGTT TTTTCTTTGT CAAGACTTTT TTACGATTTT TTTGAAAATA TCATTCGAAT          8280

ATGACCATGT CTTCCTTAGA TCGAACATGA ACATGTCCCA CTTCTTAGAA ATTGGATCCA          8340
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                                         1156
ACTCAATAGA AACTGAATGG AGGCTAAACA GAACTTATTT TAGAACACTC CATCTTTTCC      8400

ACTAGGATTT TCAAGAATTA AACAATACTA GAAACTCTGT CTCCTAACAA ATTTAGGAGA      8460

AACTTCAACA GATGTGACAC TTTCCCCTTT AATAATTGCT AAAACACCTT CTATCATTTC      8520

TTTAGCCAAT TTAACATAAT TGGGAGCAAT TGTAGACAAA GCTGGAGTAT AATACTGAGA      8580

AATAGGAATA TTATCAAATC CAATGATAGA AATATCATCT GGAATAAGAA TTCCTTTCTC      8640

ATAGCACGCA CGAATCAAGC CCTGAACCTT TTCATCTCCT GAAACAAAAA TAATGTCCGG      8700

ATAATTTTGG GTAGTCAAGT GCTGCATTGC ATAAGAATAA ACTGAATCAA TTGTAGATAA      8760

GCCATAAATG ACTTTTAAAT CCATAAAGTA ATTTTTATCA TTCAGAAAAG AACGCACACC      8820

TCTTTCACGA TCCTTATTAA CATGGGATTC TCCTCCCATA AGCAACCACA TATTTTTAAA      8880

TTTTTCTTCA GTTACAGCTT TCATCATATC ATAAGTAGCT TGAAAATTAT TATTAGATAC      8940

ATAGACTACT CCAGACGTTT GAGATTCACC GAAAACAAGA AAAGGCATAT GGTTCTTCTT      9000

TAAATACTGA ATTCTGATAT CATCTACACT TTCATAAAAA ACAATAACAC CATCTACTAG      9060

GCTACCTGTG CTTGATATAA TTGAATTACT AATTGTATCC TCCTCTCCAA AGTACTCAAC      9120

TATAGCATTA ACACCAAATT CTTTACACGT CCGTAACACT TTATCTAACA GCGTATGAAA      9180

CCAAATTAAA GGAAAAGAGT CGATTTTTTT TACAGAAATC AATATATTTA TAGCTTCTTT      9240

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AATCGCTTGA TAAGTTTCTT CTTTAACATT TACTCCACCA TTAATAACTC GTGAAACTGT      9360

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ACTTTTTCAG TAAAATGTGT AGGATTTATA AAAACATATA ATAGCCTGTC AATGTAACAT      9720

TTTAACATAG AGTTAATTTT TTCTTTAAAG ATAACATTTG TTATCAACTC ATCAGGAGGT      9780

AAATGAAAGG CAAACACCAT TTCACAAATA TCATAAAAAG AAATAAATTT GTATACTTGT      9840

ATCAAACAAT TATTATCAAA ATATTCTATT TTACCTAAAT CAAAATTGAT TTTATAATCT      9900

TTCATAAAAA CCTCTGAGCA AAAATCTACT CAAAAATTAG ATGATTAAAA CATCTAAAAA      9960

GCAAAAGGAC AAAAACATCT GTCCCTTTGT TTACTAAATT TCAGCTAATT TCTTCGACAT     10020

AAATAACACC TACAATATTA GCAATTTCTT CCATCAGTCG AAGATGTTCA AATCTACCTG     10080

ATAATTCCAG AGTAATAAAT GACGCTATTT TTTTGTCCGG AACATCAAAG TATTCAATTC     10140
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1157

TGTCAGAATT AACATCTCCA AACGCTGTTC TTGAATCGGT CATTCTGATA CCATTTTCTG   10200

CACAATAAAC CAATACACGA TTATAGGCTT CTGTAGATTT AACCACTATA TACAATTCAA   10260

TCATTTTAGA ACGATTTTGC AGATATTTTT TTAGTGGTTG GAACATGGAT ATCACACCCC   10320

AAACAGAAAT GGCTACTAAA AGAGCTCCCT CATAAGG   10357

(2) INFORMATION FOR SEQ ID NO: 192:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 6867 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 192:

CGGGACATTC TCAATCTTCT GTCTTTTGTT TTTCTCTTCT TTCTATGATA CAATGGAAAA   60

AATAAATTCA AAAGGAGTTT TTTTATGACT TATCCAAATC TCTTGGACCG CTTCTTAACC   120

TATGTTAAGG TCAACACGCG CTCTGATGAA CACTCTACTA CTACTCCAAG TACACAGAGT   180

CAGGTTGACT TCGCAACAAA TGTCCTAATT CCTGAAATGA AACGTGTTGG ACTGCAAAAT   240

GTTTACTATC TACCGAATGG TTTTGCTATT GGAACCTTGC CAGCCAACGA TCCGTCTTTA   300

ACACGTAAGA TTGGTTTTAT ATCGCACATG GATACTGCTG ATTTTAATGC TGAAGGAGTC   360

AATCCACAGG TAATTGAAAA CTACGATGGT GGTGTGATTG AACTAGGGAA TTCTGGTTTC   420

AAACTCGATC CAGCTGACTT CAAGAGTCTT GAAAAATATC CAGGACAAAC GCTCATCACA   480

ACAGATGGAA CAACCTTGCT AGGTGCTGAT GACAAGTCAG GAATTGCTGA AATTATGACA   540

GCCATTGAAT ATCTAACTGC TCATCCTGAA ATTAAGCACT GTGAGATTCG TGTTGGTTTT   600

GGTCCAGATG AAGAAATCGG TGTTGGTGCC AATAAATTTG ATGCAGAAGA TTTTGATGTG   660

GATTTTGCCT ACACTGTTGA TGGTGGTCCA CTAGGTGAAC TTCAGTACGA GACTTTCTCA   720

GCCGCTGGTG CTGAATTGCA TTTCCAAGGT CGTAATGTCC ACCCTGGTAC TGCCAAAGGG   780

CAGATGGTCA ATGCCCTTCA GCTAGCAATT GATTTTCATA ATCAACTTCC AGAAAATGAC   840

CGACCTGAGT TAACTGAAGG TTACCAAGGT TTTTACCATC TAATGGATGT GACAGGTAGT   900

GTTGAGGAGG CGCGTGCAAG CTACATCATT CGTGATTTTG AAAAAGATGC CTTTGAAGCG   960

CGTAAAGCAT CCATGCAATC TATCGCTGAT AAGATGAATG AAGAACTTGG GAGCGACCGT   1020

GTCACTCTCA ACTTGACAGA CCAGTACTAC AATATGAAAG AAGTCATTGA AAAAGATATG   1080

ACTCCAATTA CCATTGCTAA AGCCGTTATG GAAGATCTAG GTATCACGCC TATTATCGAA   1140

1158

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CCAATCCGGG GTGGAACAGA CGGCTCTAAG ATTTCCTTTA TGGGAATCCC AACTCCGAAT    1200

ATCTTTGCAG GTGGCGAAAA TATGCACGGA CGTTTTGAAT ACGTTAGCCT TCAGACTATG    1260

GAACGTGCAG TTGATACCAT CATTGGCATC GTAGCTTATA AAGGCTAAAA AGACGAGGTA    1320

GCTCAGCTAC TTCGCCTTTC TTTTTATTCT ACTGGTTTTT CTTGATTTCC AGTAGTTGTA    1380

GAAGATTCTG TTGTTTCATT TTCTGAAGTT GATTCAGCAG GTTTAGAATC TCTTGTATTG    1440

CTTGGTTTGT TTTCGTCGCT AGCAGTTTCA ATGTTAGATT CTGCAGTTGC GTTTGGTTGG    1500

TTCTCAGCAC TGGTGTTATC ACCATTTGCT TCAGCATTTC TTGCTGGACT TGTTTCTTCA    1560

CTTGCGCTAG CTTTTGACTG GATTTGATGA TTCAAAACTA GAATAGCTTT TGTCGATTCA    1620

AGTAAAGCTG TTTTGTCTTT ACTCTTAGCA GAAAGTTGAT CTAATAATGC ATCCACCTTA    1680

TCAAAGTCCG CATCAGATCC ATTATTACTT TCTAAATAAG AGTGAAGCGA CATGAGAATA    1740

TCGTAGAGTT TTTGATAGAG TACAAGTGTC TGAGGATCTT GCTCAGCATT TTCCTTTTCT    1800

TGTTGAAGGG CGCTAGCGAT ACGAGTCAAG ACATCTTTTA CCTGACTGTT TACTTCATCC    1860

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TGTCTGATTC CTTCTTCATG GATTTGTTCC AAGAGTTGAT TTGCCTTGCT CAAAAGACTT    1980

TCTACTTCTT CCTTGCTATC TGTCGCAGAT TATTGGTTGC TATCTACCAT GTACTCCTAA    2040

AACAGGAGAG TTATAATCCA AGATTACAAG GCCTTACAGA AATAAGAAAT CCAGATAAGA    2100

CAATGTTCGT CCAAGACGCT ATTCGCTTCG CACAGCAGCA CGGATTCAAT ATGCTTTAAT    2160

TTTAAAGTTT AGGTGTCAAG ACCTCTTTTT AGTGTGCCCA AAATTTAGAG AAGTAATCAA    2220

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GCTTCATATC CCTTAGTTTG AACCTTGATG TAGTGATTGT GGTCGCCATG AGGAATCACA    2460

AAACCTTCTG AATCTTCACT TATAATTCGA TTGGCATCAA AACCATGACC ATCTTCTTCC    2520

TCATGATGGA CATGTAGTGA CGGATTACTT AATACAGAAC TAGAAGAACT TCCTACCTCT    2580

TCCGTGTTAG AGTGTGATGG GGGATTGTTA AGAGATGACT TAGGAATATA GTGATAGTGA    2640

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ACATATGTGG CTGCTAATTC ACCTGCCGAC AAGTCACTCT CAGGAATGAA ATGATAGTGA    2760

CCACCATGTG GTACTATAGT AGATTGAAAT AGAATATGAG CAAATTGATA AGGGGATTTT    2820

AAAGTAATTT CTAACAATGA TTTAGAAACT ATGATGTGCT ATTCTAAATT CAACTCACTA    2880

TATATAACCA TCATCGGTAG TATAACGTCC CTGTAATTTT GCTACAGATA CTTCTGCACT    2940
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1159

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AGCTCCTTTA TCGTCTTTAC CATGTTCTTG TTTTTGGCGA TTGATTTCAT CTTTTGTTCG   3000

TACATTTTCT GCATGAGCTT GATCTTTAAG GTAAACATAA TACTTTCCAT CTACCTTAAT   3060

AATATATCCT CCCTTAACCT AACTGACGAT ATCTTGATCT TTCGGCTGAT AGTTGGGGGC   3120

TTTCATTAAT AGCTCTTCAC TAAAGAGCGC ATCAAAAGGA ACTTTACCAT TATAGTAGTG   3180

ATAATGATCG CCATGAGAAG TTACATAACC TTGATCTGTA ATCTTAATAA CAATTTGTTT   3240

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GTCTTTATTA CTGTTTACAT ATGAAACACG ATTTTTATCT GTATTGGCCT GTTAGCTATG   3360

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TTATTAAATG ATTAAATAAA TTAATTAACC AATTAATTAA CTAGTAAATA TTCCACCTCT   3540

TTTTAAGTTG TATGTCAAGA AATTTTATAT ATTAATAATA AAATGAAATT CTCCCAAAGT   3600

CAGAGTTTTA TTTCTAACTT TTGAGAGAAC TTCATTTTTG ATTCAGACTT TTTCTACTGC   3660

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TAATTCAATC GTTCCATCCA TATTGAATAT AACACTATCT AAGCCTAATC CGTAACTAGC   3780

TGTAAATTTT TCTAATTTTT CTTGTACAGG ATCTACTGCT GGAGCTTCCT CTAATGCTGG   3840

ATCTAACATA GGGTCACTCC CCACATTCCC TTCTGGATTC AACATTCCAT TATCCGTTGA   3900

GTTTTCTGGT TTTACAGGTT TTTCGTTTGG TGCCTCTGGT AAAGAATCTG CTGGTTTATT   3960

TTCTGTTGGT TGGTTCTCAA CTGTTCCAGT AGATACTTTT CCATTTTCAG ATGGTTTATT   4020

TTCACCATTT CCTTGAGGTG CTTCTCCTGT AAAATCTGCC ATATTCTTTT TAATGACTTC   4080

TCCCGATGGT AAATATAATT CAATTGTTCC GTCCATATTA AACAAGACAT TTTCTAGCTT   4140

CATCCCATAA CTTTCAGCAA ATTTTGCTAC TTTTTCTTGT ACAGGATCCA CTGTAGGAAC   4200

TTCTTCTAAC GTTGAATTAC TAGTACTATT CCCAGTTTCA GAAAGTTTTT CTTTTTCTAC   4260

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AGGAATTTTA TTTCCGGCCG TTCTGGTTGT TCCTTGGTTT AATTTCGGAA TCGGTAATTT   4500

GATTTCACCA ACTTTATAGT TATTTTCTAA ATAAGCATTT CCATGAAATT CATCAAACAC   4560

TCTGACTAAA GCATCAGTTC CTTTAGGCAC TGCAAATTGA GGGTTCACTC TTAAATAAGT   4620

ATCCCCTGCA TGGAAAGGAT AGAAAATCGT TTGACTGGCC ATTTTGTAAG CTAAAGAGGT   4680
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                                      1160
     TGGAACTGTA AATGTACCAT CATAACTTAC TTCTGGATAA TCTTTTGAAG CGATAGTATA      4740

     CTTAAATGTT TGTCCTGGTA AATAAGGTTG ATCTAATTCA AAGTTTGCAA TATTCCCTAC      4800

     TCCTTCTCCA AATACTTTAC CAGATACTTT CTCCAATACT TTTCCATCTG GTGTTATTAA      4860

     TTTTACTAGC ATATTGATAC CTAATTTTTT CTCCAATTCA GGCGGAAAAC TAAAAGAAAC      4920

     GCGTTTTTGA CCATTGGCTA GAGTAAAGTT TTGATTATTA AACGTACTAT TTTTTAACAA      4980

     ATTAACAACA TTCGTTAATT CTTCTCCAGT ATAAACTTTA TTCCCTTCTT TTTTAGCAAC      5040

     TCCTTCTTCG GGTTTAAACA GTTCATAGTT ACTGTGAGAA TGACCAATTC CAACCGGTTT      5100

     ATGTTCATCA ATCGGATCTG CATGATGGTG ATCTCCATGC GGATAAATAA TCGCATTTTT      5160

     TTCTTTATTC ACGACAATAC TTTCACGTTT GACACCATAT TGTTTCATAA TGCCAGCAAT      5220

     TTTTTCTTCG ATTTTTTTAT CTAAATCTTT CATTTCTTTG GCATTACTTG GATAATCCTG      5280

     TTCATGAGAT GACAAAGAAT CTAATCCATT ATGACTAGTT TTAACTTCCT CTAAATGTTT      5340

     TTGCGCAsCT TAATTTGCTC TTCTGTCAAG TCCTTCTTGA AGAAATAATG ATTGTGGTCT      5400

     CCGTGACTCA TGACAAAACC TGATTCATCT TCAGCGATAA TACGATTAGC ATCAAATCCG      5460

     TATCCATCTT CTTCATGTTT CTCATGTGAA GTTCCTGGAT TGATTGGAAG AGATGGAGAA      5520

     GGTGTTGCTA GACTATTGTT TGGAAGAGTC GGTTGCCCAA TTTGATTTGA TTTTGGAATG      5580

     TAATGGAAAT GATCACCATG TCTTACAATA TAAGCTGTAG CCGTTTCTTC AACGATATCT      5640

     TTTGGATTAA AAATATAACC ATCAGATGCT GAAGAGAGCT CCTTACTTGT CGTTAAAGAA      5700

     GAAGGATTGC TTGAAAGACT GCCTAGACTA GACACTACTT CATTAGGTTT TGCATTTGTA      5760

     GAAACTGTAG AACCAGTTCC ACTGATAGGC ACCATTCTGG CAATCTTTTC TTCTAAGGCA      5820

     GAAAGCTTGC TGTAAGGAAT AAAGTGGTAA TGGTCGCCAT GCGGAATCGC AACTCCATTT      5880

     GGTGTACGAC TGATAATCTT AGCAGGGTCA AAGACCAGGC CATCTGATTC ACTGTAACGT      5940

     TGGGCGCTAG GTGAATCATA GAGTTCCTTC AAAAGACTCT GGAGATTTTC AGATTTATTT      6000

     GCTGGCTTGC TAGTTGATCC TTTTGCTACA GATTGCGTGT TATTGTCACT AGCTGTTGAA      6060

     GAATAGCTTA ACTGACTCGG TTGCATATTT TTTCCAGCCA GATGTGCTTT AGCTGCTGCT      6120

     AATTCACTAG CAGATAAATC GCTTTTGGGA ATGTAGTGAT AGTGACCTCC ATGAGGAACG      6180

     ATATAAGCAT TACCCGTATC TTCGATAATA TCAGCTGGAT TAAAGACATA ACCATCATTT      6240

     GTCGTATATC GTCCCTGAGA CCTTGCTACA GCAACATTAG AGTTAACCTT CTCATTATCT      6300

     TTGACATGTT CTTGTTTTTG ACGATTGATT TCATCTTTAG TTCGAACATT ATCAGCATGA      6360

     GCTGCATCTT TCAGGTAGAC ATAATATTTT CCATCGACCT TGATGATATA ACCACCCTTG      6420

     ACTTCATTGA CAATATCAGC GTCTTTAAGT TGATAGTTTG GATCCTTCAT CAAGAGTTCT      6480
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1161

TCACTAAAGA GGGCATCATA AGGAACTTTC CCATTATAGT AATGATAGTG GTCACCGTGT   6540

GACGTTACAT AGCCCTGATC TGTAATTTTG ATTACAATTT GCTCAGCCTG AATTCCTTCT   6600

TTCTGGCTAA CCTGGTCTGG TGTCAAGTTT TCACTTTTCT GACTTGACTG GCTGCCATCC   6660

ACATAAGAGA CACGATTATT GTCCTTATTT TCCTGCGAAC GATGCTGGTT TAGTGCATAG   6720

GCACATAGAC TCAAGGATAC GATAACAGCT GATCCAGCTG CTATATATTT TTTACTAAAT   6780

TTCATAAATC CCTCATTTCA ATAAATGATG AAGTTTTTTC TCAACTTCTT TTACTTTATT   6840

AAATAGTTTT CTAAACCCGG GGGTACC   6867

(2) INFORMATION FOR SEQ ID NO: 193:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 999 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 193:

CGTTCTAAAA ATGCAGTACG TTTGATTGAG AAATCAGTTA AAGGTATGCT TCCACACAAT   60

ACACTTGGAC GCGCTCAAGG TATGAAGTTG AAAGTATTTG TTGGAGCTGA GCACACTCAC   120

GCTGCACAAC AACCAGAAGT TCTTGACATT TCAGGACTTA TCTAAGGAAA GGAACAATAA   180

AGTATGTCAC AAGCACAATA TGCAGGTACT GGACGTCGTA AAAACGCTGT TGCACGCGTT   240

CGCCTTGTTC CAGGAACTGG TAAAATCACT GTTAACAAAA AAGATGTTGA AGAGTACATC   300

CCACACGCTG ACCTTCGTCT TGTCATCAAC CAACCATTCG CAGTTACTTC AACTGTAGGT   360

TCATACGACG TTTTCGTTAA CGTTATAGGT GGTGGATACG CTGGTCAATC AGGAGCTATC   420

CGTCACGGTA TCGCTCGTGC CCTTCTTCAA GTAGACCCAG ACTTCCGCGA TTCATTGAAA   480

CGCGCAGGAC TTCTTACACG TGACTCACGT AAAGTTGAAC GTAAGAAACC AGGTCTTAAG   540

AAAGCTCGTA AAGCATCACA ATTTAGTAAA CGTTAATTCG AAAGAATTAC TATACTTATA   600

CAGAGCACCT TTCGGGGTGT TCTTTTTTTA TACTTTCTTA CTAAATTGGT GCAATTGACA   660

CAGTTGTTGC GACTTTAGTC GCTTACAAAT GTGGCTGCAA CCTGACATGG TCAGTTGCCT   720

CAAAACGTTA ATCAATACGA TTATATCAAC GTTTCAAAGC ACTCAAGGGT TTACCCTATG   780

GGTGCTTTTT TCTATACTTT CTAAAAAAGT TTACCCTAAA ATTTGCCCTA AAATTACCCT   840

ACTTATTTTT AAGATGTTGG TAGGCAACTT GTCCAGCAGA TAATGGAACT ATGTTTGAAG   900

TATTAACATA AGTCTTAGTT GTAACGGTAT CGCTATGAGT TAATGCTTCA GAAATGGCTT   960

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                                    1162
        CTAAGCTCAT TCCTGCTTTT TTAGCAAGTG TCGCTCCTG                           999
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(2) INFORMATION FOR SEQ ID NO: 194:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2315 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 194:

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AATATTATCA CTGTTCTTGA AGGCAGAACA CAAGCTGTCA TCCGAAATCA CTTTCTTCGC       60

TACGATAGAG CCGTTCGTTG TCAAGTGAAA ATCATTACGA TGGATATGTT TAGTCCTTAC      120

TATGACTTGG CTAAACAGCT TTTTCCGTGT GCTAAAATCG TTCTAGATCG TTTCCATATT      180

ATCCAACATC TCAGCCGTGC CATGAGTCGT TTTCGTGTTC AAATTATGAA TCAGTTTGAA      240

CGAAAATCTC ATGAATACAA GGCTATCAAG CGTTACTGGA AACTCATCCA ACAGGATAGT      300

CGTAAACTCA GCGATAAACG TTTTTATCGC CCTACTTTTC GCATGCACTT AACAAATAAA      360

GAAATTCTTG ACAAGATTTT AAGCTATTCA GAAGACTTGA AACACCACTA TCAGATCTAT      420

CAACTCTTAC TTTTTCACTT TCAGAACAAA GACCCTGAGA AATTTTTCGG ACTCATTGAG      480

GACAATCTGA AGCAGGTTCA TCCTCTTTTT CAGACTGTCT TTAAAACCTT TCTAAAGAAC      540

AAAGAGAAAA TCGTCAACGC CCTTCAACTA CCCTATTCAA ACGCCAAATT GGAAGCGACC      600

AATAATCTCA TCAAACTTAT CAAACGCAAT GCCTTTGGTT TTCGAAACTT TGAAAACTTC      660

AAAAAACGGA TTTTTATCGC TCTGAACATC AAAAAAGAAA GGACGAAATT TGTCCTTTCT      720

CAAGCTTAGC TTTTCTTCAA CCCACTACAG TTGACAAAGA GCCTATTTTC GCTGATTCTC      780

CACTACATTT GACTGGATTC TAATTTTTTA GAGAAATACA AAAGAGCTAG CTTTAGCTAG      840

CTCTTTTCCT ATGCGGAGAG AGGGACTTGA ACCCTCACGA CCTAAAGCGG TCACAGGATC      900

CTTAGTCCTG CGCGTCTGCC AATTCCGCCA TCCCCGCGTC GATTACTTTA CTAGTATATC      960

AACTTTTGGG ATGCTTGTCA CACTTTTTT TCAAATTTTT TCATTTTCAC CAACCAGGTT     1020

ACTCAAAAAG TTCATTTAGA TTTTCATCTA CTAACTTAGC TCCGAGTGTA TTTTTGAAAT     1080

GACCTAGGGC AAATTGATGA TTTTCAGGCC AGATGGAAGC AACAGCTGGT TTAACAATCT     1140

CGATGTCATA TCCTAGATTA TAGGCATCTA TAGCTGTATG TAGGACACAG ATATCCGTCA     1200

AGACACCTGT TAAGATAACG GTAGACACTC TACGCTCTCT CAAACGAATA TCTAGGTCAG     1260

TCCCTGAAAA AGCTGAGTAA TGGCGTTTAT CCATCCAAAA GACACGACTG TCTGAACCAT     1320

GCTCTTGATA AAAGATCCCC AAATCTCCAT ATAAATTCCG TCCACTCGTC CCAATCAGAT     1380
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1163

TATGAGGAGG AAATAACTTA CTTTCCGGAT GGAAACAATC GTTTTCTTCA TGAGCATCAA   1440

TAGTAAAGAA GATATAATCT CCTCGTTCAA AAGCTAATCG AGTTACCTTG CTGATGGCAT   1500

CCGAAATCGC CTGAGCTGGA GCACCTGCTG TTAGTTTCCC ACTATCAGCA ACAAAATCTT   1560

CTGTATAATC AATCGAAATT AAAGCCTTTG TCATTAGTAA TCTCTTTTCT TCACTTCTTC   1620

AAAAATATCT GAAATCAAGA CCTTAAGATA GGTTCCCTTC ATTCCAAGTG AGCGACTTTC   1680

AATAATCCCC GCAGACTCAA GTTTACGAAG AGCATTGACA ATCACAGAGC GAGTGATTCC   1740

GATACGATCT GCAATCACTG ACGCAGTCAA CTTCCCTTCA TTTCCATTTA ATTCCCCTAA   1800

AATTGCTGAA ACAGCACGGA GTTCGGAGTA AGAAAGGGTA TTGACCGCCA TGGTGACAGC   1860

AGTACGACGA CGAATATTTT TCTCATCTTC TTCACGTTGG AAGTTAAGAA GCTGAATCCC   1920

AACAACGGTA CTGGCAATCT CAACAAGAAC CAAGTCCTCA TCTTCGAATT TTTTATCATT   1980

ACGCCAAATA ATCAAAGAAC CAAGGCGAAT CCCCGATACA TGAATCGGTG CAATAGTCGT   2040

CAAGCCATCT GGAAAATCAT CTCTACTCTC AATAGGGAAA ATACTCATAT CATGCTCAAC   2100

AGGCAAGTTT GCTTCTGTTT CGTAAATCAT ATTAGCCCCT TGAACGTAGT CATCTGGGAA   2160

AATCTTAGTT TGGAAGAATT GCTtACGCGA TCTGTATTTG TTTTATAACG CATAAAATAG   2220

CCAAGCAGAC GTCCCTTACT ATTGATAATG CAGGCATTGC AATGAATAAT ATCCGCTAAC   2280

TGACGCGTAA TAGCGTTGTA AGGGAGCTCA TCTCG   2315

(2) INFORMATION FOR SEQ ID NO: 195:

       (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 6693 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

       (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 195:

CGATTTCTTC CATTTCTTCA AATAAGAATA CTTCATCTGA CATATGTGTT ACCTTCTTCA   60

TCAAAAATTA TTTTGTAATC GATTACATTG CAGATCGTAA CATAAAGAAA AACAGATGTC   120

AAATATTAAA CGTAAAAACA TGGTCACTAA AGAACTATAA GAGAAAAGGT AAACCTAGCG   180

ACGCGATGAA CGCTGGGTCG TTTGGTTTCG ATTGCTCTCT TCCTCTTGTT TTTTCTGTTC   240

TTCTTCTTGT TTTTTCTCAG CTTCCTTGGC CTCTTGTTTG GCTTTTTCCT CAGCTTCCAT   300

AATTAATTTA TCCGCCACAG TGTAGCTGTA GATTCCAGCT TCCATGTCGA CCACACTCGG   360

TTCTGACAAT TGAGGCTTAA TCTTACTGTA ATATGGCAGT TTCTTACTCA TTTCAGATAG   420

1164

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AGGAACCAAG ACTTCGTCCG AATCATTCAT GGTCAATCGA ATTAAATCGG ATGTCACCTT      480

GCTTGGGGCT AATTCCACCT TTTGGATAGC CGCCTTGAGT TCTGGGCTAA TTTGAGCAAG      540

TTCTGAGACA AAAACTTTGA TTTGTTCACT ATCATTAAAG AGAACTGATA AATAAGTTTC      600

TGGTAAACTG TTCAGACTCA CAGAACTAGT CTCAAGCTGA CCACTGGAAA GAATAGGATA      660

ATGATTTTCA CCAGAAATAT AGTAGGCCAC AATATCATAT TCCTTGACCT TAATAGTGAA      720

CTTAGTTGGA AATTGATAGA CAAGTTGAGC TGATTCAACC CAATAGTTAG ACTTAATCTG      780

CTTTTCATAT TTTGCCTTGT CTAGCAGAAG GTTAATCGTA TAATCCGAAT CCTGAATGCC      840

TGAAGCCTGT CGAATATCAT CAGCTGTAGT TTGCACCGTT CCCTCAACAC GAATATCTTT      900

CATGGTCGCA TAAGGACTGA GCAAGTAGGC AGAGACAAAC AATAGAAGCA GACTTGGAAA      960

TAAAATCGTG AAGGCTCGCA AGATATGGAT ACCAGGAATC TTTGCTTTGG CTGGTTTTTC     1020

CTTTGTAGCC TTTTTAGCAA GCTTTTTATC CTGTTCCTCC TTCTCTTTAG ACTCTGGTTC     1080

TTCTTTCTCT TCTTTCTCTT TGTCAGCCTC TGAGGATGCT ACTTTTTCTT CAGACTCTTC     1140

CTTAGCTGAT TCTGAATCTT CCTGGTCTGT TTCACTCTCC TGGTCCTGTT TATCCTCTGA     1200

CTTCTCAGAT TCTTCTCCCA TTCGAGCTTG TCTTTCCTTT TCCTTCTCCT CAGCTAGAGC     1260

CGCCTCTTCT TCAGCCTTCT TTTTTAGATA TTCTTGGTTT CGTTTCTGCC ATTCTGATAA     1320

CTCTTTCAAT TCTTCGAGGG TTTCTTTGTC CTCATTTTTC TTATCTTTTG ACATTTACTT     1380

TCCTTATGAT AAATCTTTTT TCAACAATTG ATAAAAATCT GCTAGAGATT TCAATTCCTT     1440

AGAAGCTTTC ATCTTAGCTT GGTAATCTTC CTTGTGACTT AGTAAGTGAG AAAGCTTCTC     1500

TTCCAAACTA TCCAAGGTCA AATCGCTTTC TTGAAGGTCT TCTGCATAGC CTTTCTTAAC     1560

AAAGTAAGCT GCATTTTCAA TCTGGTCACC ACGACTAGCT TCACGACCAA GCGGCACAAT     1620

GACATGCAAT TTTGCTATCG CCAAGAGCTC AAAAATCGTA TTGGCACCAC CTCGTGTCAC     1680

AACAATATCA GCCAATTCCA TCAAGGGTTG ATAGAGATCG GTCACATAGT CAACACGAAA     1740

AAGATTTTGC CTCAACTCAT TCAGACTAGA ATCTCCAGTT AGATTGATAA TATTGTAGCG     1800

CTCTGTTAGT TCTTTCTTAT GGTCTGTCAC CAATTGGTTA AAGACACGAG CGCCTGCAGA     1860

ACCGCCAACA AACAATACAG TTGGCAATTT GGGATTAAAG TGGGTTTGAA TATCCACCAA     1920

TTCATCTGGT TCTGGAGTGT TTTTGTCCGA AACCTTGGTC ACCGCTCCCA CATGCTCAAC     1980

CTTAGCCAAA CTCGAAGCTT GTTCAAAGGT TGAATACATC TTAGTCGCAA ATTTATAGGC     2040

GATTTTATTG GCCAAGCCCA TAGACAGGTC AGATTCGTGA ATAAAGACAG GCACTCCTGA     2100

CACACGCGCA GCGATAACAG GCGGTACTGA GACAAAGCCC CCCTTTGAAA AAAGGGTCTG     2160

TGGACGCAGT CGCAACATGA TAAAGAGCGA TTGGACAATT CCCCAACCAA CTTTGAAGAC     2220
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1165

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GTCCAGCATA TTTTGCCAAG AGAAATAGCG ACGCAATTTT CCAGTCGCAA TAGAATGGAA     2280

GGTGACATCC AAACCTGACT TAAGGATTTC TTGGTGTTCG ATACCACACT TGTCCCCGAT     2340

ATAGTGGACT TCCCAACCAT CTTCGATGAA CTTGGGCATT AACAAAGAT TGAGGGTAAC     2400

GTGTCCAACC GTCCCCCCAC CTGTAAAGAC AATTTTTTTC ATATTATTCT TTTAACTCCG     2460

CTACTGTGTC GATAAAGAGG TCGCCACGTA CTTCAAAGTT AGCATACATA TCCCAGCTAG     2520

CATTGGCAGG ACTAAGAAGA ACCACATCTC CTTGAGTCGC AAGCTCATAG GCCTTGCGGG     2580

TCGCATCTGC AATATCTGTC GCCTCCACAT AAGCGACACC AGCCTTGTCT GCTGCCCGTT     2640

TGACACGTTC TGCAGATTGA CCCAGGATGA CCATCTTCTT GAGTCCAGTA ATGTCTGGCA     2700

CCAATTCGTC AAACTCATTG CCACGGTCCA AACCACCTGC AATCAAGACG ACCTTGCTGT     2760

TGTCAAATCC TGACAAGGCT TTTTGAGTAG CCAAGATATT AGTTGATTTA CTGTCGTTAT     2820

AGAATTTAAC ACCCTTGATG TCATCCACAA ACTGGAGACG GTGTTTGACA CCACCGAAGG     2880

CTGAAAGAGT TTCCTTGATG GTTTGATTGT CCACATCACG AAGCTTGGCT ACAGCAATAG     2940

TCGCAAGGGC ATTTTCCACA TTGTGGCTAC CTGGAACACC GATTTCATTC GCTGCCATGA     3000

CTACTTCACC ACGGAAGTAG AGTTGACCAT CTTCCAGATA AGCTCCATCA ACCTTTTCAA     3060

GTGTTGAAAA TGGTACAACA GTGGCTTCTG TCTTGGAAGT CAAGTCTTTT GCCAAGTCTT     3120

GATTAAAGTT CAAGACAAGG AAATCAGCTG CTGTCATCTT GTTCTGGATA TTCCACTTGG     3180

CTGCTACATA TTCCGAAAAT GACCCATGGT AGTCGATATG AGTTGGCATG AGGTTGGTAA     3240

TAACCGCAAT CTCTGGATGG AATTCTTGAA CACCCATGAG TTGGAAAGAA GAAAGTTCCA     3300

TAACAAGCGT GTCCTTATCT GATGCTATTT GAGCAACCTG ACTAGCTGGA TAGCCGATAT     3360

TCCCTGATAA AAGACCATGT TGGCCAGCAG CAGTCAAAAC TTCCCCAATC ATAGTCGTTG     3420

TGGTTGTCTT ACCGTTCGAT CCTGTGATAC CAATAATCGG TGCTTCTGAA ATCAAATAAG     3480

CCAATTCCAC CTCAGTCAAG ACTGGAATTC CCTTGGCCAA AGCCTTTTCA ATCATGGGAT     3540

TGTTGTAGGG GATACCTGGA TTTTTCACCA TAAGGGCAAA CTCTTCATCC AAGAGTTCCA     3600

AAGGATGGCC ACCTGTAATG ACCTTGATCC CTTCTTCCAG CAAACTTTGG GCAGCTGGAT     3660

TGTCCTCGAA AGGTTTCCCA TCATTTACTG TCACAATGGC ACCTAGCTTG TCCAACAAAC     3720

GAGCTGCAGA TTCACCAGAC TTGGCCAAAC CTAAAACAAG GACTTTCTTA TTTTTAAATT     3780

GATCTATTAC TTTCATGTCT CGAACTCCAT TTCTACTCCT ACTATTTTAC CATTTTTATG     3840

GAAATAAAAA AGCCACAAAG TGTGTTTGTG ACTCTTTCTT CTAACTGAAT CTTACCATAT     3900

CATCTATGTG ATAAATCGGT AACTCGAATG ACCTGATCCA CTTGCTCCCA AATCAGAGGA     3960
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1166

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TTATGGGTCG CAATAATAAT GGTCCGATTC GGATTTTTTA AAGATTCTAG GATGGAAAGT      4020

AATTCCTCAG AGTTTTTGGG GTCTAAGGAA GCGGTTGGTT CATCTGCGAG GATCAAAGGT      4080

GGATCCTTTA AAATTATCTT CGCTAGTGCA ACACGTTGTG CTTCTCCTCC TGATAACTCA      4140

AATATAGGTT GCTTCAAATC CAAATAAGAG AGGTTTACAC GGTTTAGAGC TTGTTTCATC      4200

AAAGAGATTT TCTCTTTTTC CTTCAACTTT TTACCAACTA AACCCAGATT GAGATTCTCT      4260

TTGACGGTTT GGCTTTCAAT TAAGCCAAAA TCTTGAAATA AGTATCCTAA GTAATCTCTA      4320

AAGAAAACAG AAGGCTTGAT GTCCTTAAGA GAAGTGCCAT CATAGATGAT TTGCCCTTTG      4380

TCATATGGCT CCAATCGTCC AATCATATTC AAGAGTGTTG TCTTACCACA GCCACTTGTA      4440

CCGATTAAGG CATAAATTTT CCCACCTTCA AAATGAAGAT TCATATCTGA AAATAGCTGA      4500

CGGCTTCCAA ATTTTTTAGA TATATTCTTT AGTTCAATCA TCCTATTTTC CTTTCATAAT      4560

TGTCATAGAA ACACGAGATT CTTTCTGCGC TTGACGGTAA AGCGTCAAAA CTGCACTAGC      4620

TAGAAAGACC AATAAAGTGA GCAAGCCAAT CACCAAGTCT CGACTGCTTA AAATAAAGAG      4680

ACTAGCACCA AATACAAAAC TAGCAAATTG GCTAACCATA TACTGAGCAT GTGTTTCAAA      4740

AAATCGTAAA CCTGAAATTC GTTTAATCAA GATATCTCGG CGGAATTGCT CGAAATATAG      4800

AAGATTGACA GAATAAAAGA GTAACAAGGA ACTGGCTATT CCAACAATAG CTCCTAAGAT      4860

TAAAGTTGCT GTTTCAGTTT GAACTTCATT ATAACGAGTT AGATAAACAC TTCTTCCTTC      4920

TTTAAGATAG GATACTTGCT CATAAATTCC AGCTTTCTTC AAGAGTTCTA GCCCACTCTC      4980

ATATCCTTTG ATAAAGAGTT GTTTTCCAGC ATTGATAGAC CAACTAGATA AGGATATAAA      5040

ACTATCACCT GTAGAAGTCG GCGTGAATAC CACTAAAATC GGATCAGTCA AATACTGAGT      5100

AGATACGGGA TTCTCACCGT TATTATAAAC AAACCGCTTT TCTCCCATTG AAAGATAACT      5160

AACGTGCGCT TTCATCTCAT AATCCAAAGG AGCACTTGCC TCCTCACCAG ATTTTCCATA      5220

ATAACTCAAT CTTTCTTCAA AAACTTTCTT AAGTTCTGCT CTCGAGAGC GCAAATGTTC       5280

TGGGAGCAAG AGGATAAACT CACCTTTTTG GAGATGGGCT AACTTCTGTT TGGTCTCAGC      5340

ATCTACCACG ACCTTTTCCT TGTCCAAATA ACTGGGACTA ACATAGAGCG TATTAGCATC      5400

TGAACTATAG GTATCCAGTG TCTCTCCCTG TTCATTTTTT CCTTGTGGAT TGGCAAAATG      5460

GAGCAGATTA TCCTTTACAT AAAGAGCTTG TTCTTCTTCG ATTGCTTCCT TGGCAAAGGC      5520

ATACCACTTG CTCTGATTTT CTGTATCTTT TCCTCTATCA CCTAAGCCAA AGGAAATCTG      5580

GTAATAGTCT GCTCTGTCCT GCCATGCTTG TTTTGAAATT TCAAGTTCTT TCAATCGTTG      5640

GTAAGACGTC AAACCTGTCT TAACAGCGTA GCCTACTGTA AAAACAGCTA CTAACTGACA      5700

CAATAGGGTT AAAGCCATCA AGCGTTTAAG GGGTAATCTT CCCTTAATAA CGGGAACTAA      5760
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1167

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TGCTTTGTAA CTCAAACTCA TTAGGTAAAG GAGCATTAGT AAAATTGAAA TCGCCAATAA       5820

AAACAACAGA TAGAAACTAA TCCCAAAACC ATAGGTGGCT AACAAGATAG GATAAAACAA       5880

ACCTTGACTA AAAAGAACGA CTCCCCCACC TAGGAAGGAA AGGAGGGCTG ATAGAAGGAG       5940

CCATTTGATA TCAGTAGATA AAGAATGCCC CATGATGGAT AAGAGAGTCT GACCAGAAAA       6000

GAGTTTTATA CCTGCTGCTC TCATTTCCTT AATCCGAGTG ATAATCACTA AAGCAAAGAA       6060

AGATAAGCCA AATATTGCTA AACTAATTAA AATAAGGGGA TTTAGTAATA TTCGAAAAGC       6120

AAGAAAATAG GGCGGTATCT TTCGGTCAGC ACTTGCTTTA TAACCCAAAT CTCCTAATTT       6180

ATCGGCAAGC TTTTCTTTCG TCAAGGAGCC TGACAAAAGG AGATAACTAT TTAGCGGAnT       6240

AtACGTTCAC GACTTTCTTG GCTAGCTTCT TGGAATTCTT TTGGTAAAGT TCCCTGACCA       6300

TAAGTTGCAT AAGTAAAGTG AGTCGTCCCA TCCTTACTCG GCTCTACAAT TCTTCTAGCT       6360

ATTAAACTCT GTTCTGAGTT TGCAAAATTC TCCAATTCCT GTTCAAATAC CTCACGCGTC       6420

GGTTCCTGAG TATCTTTTTT GACACGAAGT AAAGAAACGG AATCATAGCT TGCATATAAA       6480

TATTGTGGCG CACGTAAGAC AATAATCCAA GCAAGGAAGA AGCTGAGAAA AAAAGTTGAT       6540

AATAATATGA ATAGTTTCTT CATAGTAGAC TCCTTGTAAA CAAAATTCCC CCTGTAATTT       6600

CTTACAAGGG GAACGATTTA AATCAATGAA CGATTAGTCA TAATCACAGT AAAATGCTAC       6660

TTGTTCTCCC CATTTAGTCC AAATCCATGC AGG                                   6693
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(2) INFORMATION FOR SEQ ID NO: 196:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1847 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 196:

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CCGGTCTATG TACCCACTAC TTTGGGACAA TATGGGGATC AGCTACCCAA AACTAATCGA        60

GCGTTTGGTT GACCTTGCCA AGGAAAGTTT TGACAAGCGC GACGATTTGA TATAAAATGA       120

AAGAGAGGGT AGAAGCCAGA ACCATCACTG CACGGTGACT AGAGTTCTCG GACTTCAGCC       180

CTTTTTAAAG GAGTAGAAAT GAAATTAACA ATCCATGAAA TTGCCCAAGT TGTTGGAGCC       240

AAAAATGATA TCAGTATCTT TGAGGACACC CAGTTAGAAA AAGCTGAGTT TGATAGTCGT       300

TTGATTGGAA CTGGAGATTT ATTTGTGCCA CTTAAAGGTG CGCGTGATGG CCATGACTTT       360

ATTGAAACAG CCTTTGAAAA TGGTGCAGCA GTAACCTTGT CTGAGAAAGA GGTCTCAAAT       420
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1168

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CATCCTTACA TTCTAGTAGA TGATGTTTTG ACAGCCTTTC AATCCTTAGC ATCCTACTAT        480

CTTGAAAAAA CGACTGTTGA TGTCTTTGCT GTTACAGGTT CAAATGGCAA GACAACGACT        540

AAGGATATGT TGGCGCATTT ACTGTCAACA AGATACAAGA CCTACAAAAC ACAAGGCAAT        600

TACAATAATG AGATTGGCCT TCCTTACACA GTTCTTCATA TGCCTGAAGG AACAGAAAAG        660

TTGGTTTTGG AGATGGGACA GGATCACTTG GGCGATATTC ATCTCTTGTC TGAATTGGCT        720

CGTCCAAAAA CAGCCATCGT GACCTTGGTT GGAGAAGCCC ATTTGGCCTT TTTCAAAGAC        780

CGTTCAGAGA TTGCTAAGGG AAAAATGCAA ATTGCAGACG GAATGGCTTC AGGTTCCTTG        840

CTTTTAGCGC CGGCTGACCC TATCGTAGAG GACTATTTGC CAACTGATAA AAAGGTGGTT        900

CGTTTTGGGC AAGGGGCAGA GCTGGAAATT ACTGACTTGG TTGAGCGCAA AGATAGTCTG        960

ACCTTCAAGG CCAATTTCTT AGAGCAAGCC CTTGATTTGC CAGTAACTGG CAAGTACAAT       1020

GCGACAAATG CTATGATTGC ATCCTATGTT GCCTTGCAAG AAGGAGTTTC AGAGGAGCAA       1080

ATTCGTTTGG CCTTCCAAGA TCTTGAATTG ACGCGTAACC GTACCGAGTG GAAGAAAGCA       1140

GCCAATGGAG CAGATATCCT GTCAGATGTT TACAATGCCA ATCCAACTGC TATGAAACTG       1200

ATTTTAGAGA CTTTCTCTGC CATTCCAGCC AATGAAGGTG GCAAGAAAAT TGCAGTGTTG       1260

GCGGATATGA AGGAGCTTGG TGACCAGTCT GTTCAACTTC ATAATCAGAT GATTTTGAGC       1320

CTTTCTCCAG ATGTGCTTGA TACCGTGATT TTCTATGGAG AAAATATTGC TGAATTAGCC       1380

CAATTGGCCA GTCAAATGTT CCCAATCGGC CACGTTTACT ACTTCAAGAA AACAGAAGAC       1440

CAGGATCAAT TTGAAGACCT AGTCAAGCAG GTCAAGGAAA GCCTTGGAGC CCATGACCAA       1500

ATCCTGCTCA AAGGCTCTAA CTCTATGAAT CTAGCCAAGT TGGTAGAAAG TTTAGAAAAT       1560

GAAGACAAGT GATTTTGTCA AGTATTTGCA AAGAATGATT GCCATTACAG ATACTGGCTT       1620

AACCTTTACA AAAGATCCGT TTGACCGTGA GCGCTACGAA GACTTGCGAA GTCTGTTATC       1680

TGAAATGTTG AATCAAGCAT CAGACCTTGA TTCCGAAGAA GTGGCAGAAG TCTTGAAGCC       1740

AACTTCTGCT TATGCGACTC CGTTAATGGA CGTCCGTGCT TGGATTGTTG AGGATGAGAA       1800

GATTTGTCTG GTTAGGGGAC AAGGAGAGGA TAGTTGGGCT TTGCCGG                     1847
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(2) INFORMATION FOR SEQ ID NO: 197:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1062 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 197:

1169

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CAAGCGAAAA CATTTTTTAT TCCAAATAAA CAGAGCATTT TAGGAGAACA AGAGATTTTG        60

AATGCCAAGT CGATCTTGGC CTTGCTAGAC GGTTTGGAGT CACATAGCTA TGATGTAGTC       120

TATCTCCGTC AGCCTCTTAA TCGTCTCGAA TATATCGAGT GTGCGATAGT GGGGCAATCA       180

CAATTTCTCT TTAAGGTCAG TTATGCTGAT GGTCAAAAGG CTTACCGTGT CGATCTTCCT       240

GACCTACTAA CAAAGACAGA CTGGCAGATT ATCAAGTCAT TTTTAGATGC TTTGCTTGCT       300

TATACAGGGA CTGATATTGA AGGGCTAGAT GGTTTTGATT TTGAAGCTTA TTTCCAAGCA       360

AGTATTCAAG CCTATCTAGC AGACCCTGTA GCTCGTTTTA CGATTTGCCA AGGAATTTTT       420

AATCCTATTT TCTTTAGTCG TGAGAACTTG AAAAGCTTTT TAGAGGCAGA TGGCTTGGCT       480

CAGTTTGAAG CGCGTGTGCG TGCGGTTCAA GAGACAGATG CCTACTTTGC GAGAGTTTCC       540

TTCTATCAGG ATGGAGAAGG AAAAGTGCAT GGCGTTTACC ATCTAGCTCA AGGAGTCAAG       600

ACAGTTTTAC CGAGAGAACC GTTTGTTCCT GCAGCCTATA TTGAGCAATT GGTGGATAAG       660

GAAGTCCAGT GGGAGATTGA CTTGGTTCAA ATCACAGGAG ATGGCTCTAA ACCAGAAGAC       720

TATGAAGCCA TTGCTCGCTT GGACTATGCA AAATTCTTAG AGGTATTACC CCCATCTTTT       780

TACCACCAAC TAGACGCCAA TCAAATAGAA GTGCAACCCA TATTAGACAA AGATTTTAAA       840

ACATTAGCAC AAGAAAAGTA AAGCAGAAGC AGGTCAATCG ACTTGCTTTT TTGACATAGA       900

AAAAATCCTG CCAAGaTGAC AGGATTGCTA CTCAATGAAA ATCAAAGAGC AAACTAGGAA       960

GCTAGCCGCA GCTGTACTTG AGTACGGTAA GGCGAAGCTG ACGTGGTTTG AATTTGATTT      1020

TTGAAGAGTA TGAAGTTTAA AGAAAAGCCA AGATACGAAG AT                         1062
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(2) INFORMATION FOR SEQ ID NO: 198:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 6846 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 198:

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TATCTACAAC CTCAAAAACA TGTTTTGawG gCTCGTCAGT cTATCTACAA CCTCAAAAAC        60

ATGTTTTgAa kGCtcGTCAG tTCTATCTAC AACCTCAAAA ACATGTTTTG AcaGCcTcGT       120

CAGTTCTATC TACAACCTCA AAAACATGTT TTGAGCTGAC TTCGTTAGTT TCATCTACAA       180

CCTCAAAAAC ATGTTTTGAG CTGACTTCGT TAGTTTCATC TACAACCTCA AAAACATGTT       240

TTGangnCnT CGTCAGTTCT ATCTGCAACC TCAAAGCAGT GCTTTgagcG CTTCGTCAGT       300
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1170

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TCTATCTACA ACCTCAAAAC AGTGTGTTGC GCAGCCTTTA ATCAGCCGCC TAGTCCGCTC      360

TATGGTATTC ATTAAGTCAA CATCTCTTGT TTAAGAGCAC CAAATCAGGA AATCTTCTCG      420

ATTCCCTGAT TTTTTCTATT TACGTTTTCG TGTTGAGCTA CGTTCTGTCA AACCATGAGG      480

TAAGAGAACT TCACGTTCTT CCAACTCTTC CTTATGCATA ATCTTGGTCA ACATACGCAT      540

ACTAATGGCA CCAAGGTCAT AAAGAGGTTG GGCAATCGTT GTCAAGTTTG GACGGGTAAA      600

GCGTGAGATT TGTGAATCAT CACTAGTAAT AATTTCAAAA TCTTCTGGCA CAGAAACACC      660

CTTATCAGCC AAACCGTTCA AGACTCCTGC TGCCAACTCA TCACCTGTCA CAACTGCTGC      720

AGTTGCATTT GATGAAATCA AACGCTCTGC TAAGGCGTAA CCATCATCAT AGCTATATTT      780

AGATTCAAAT ACCAAACCCT CACTATAAGT GATTCCTGCT TTTTTCAAGG TTTCCTTGTA      840

GCCAACTAAA CGAACCTTAC CATTGATGTC ATCCACTAGC GGACCGCTAA CGAAAGCAAT      900

ACGCTCATTT TCTTTAGCAA GGTAACTCAC TGCATCAATT GTTGCTTGCT TATAGTCAAT      960

ATTGACACTT GGCAACTGGT GCTCAACATC GACAGTTCCT GCGAGAACAA TCGGAGTACG     1020

TGAACGCGAA AATTCTGAGC GAATTTTATC TGTCAAGTGA TACCCCATAT AGATAATGCC     1080

ATCTACCTGC TTTGAAAAGA GGGTATTGAC AACAGAAACT TCTTTCTCGT TATCTTCATC     1140

GCTATTAGCT AGGACAATAT TGTACTTGTA CATTTCTGCA ATATCATCAA TCCCCTTAGC     1200

CAAACTCGAA AAATAACCAT TGGTAATATT TGGAATCACG ACACCGACAG TGGTTGTCTT     1260

TTTACTTGCA AGACCACGCG CAACTGCATT TGGACGATAA TCCAAACGAT CAATTACCTC     1320

TAGCACTTTT TTACGGGTAT TCTCTTTTAC ATTTTTATTG CCATTGACCA CACGGCTGAC     1380

CGTCGCCATG GAAACACCTG CTTCACGAGC GACATCATAA ATGGTTACTG TATCATCTGC     1440

ATTCATTCCT TTTCCTGTCC TTTCTATCTC ACACATTCTT TTACAAGTAG AGGTACTGAT     1500

TGAAGCTCTA TATCTACTTA CAAAAGTGAA GATGTGAAAA TTTCGTTTTC ATATTTCTAC     1560

TTATTCCATT CTATCACTAA TTGTAAACAC TTTCAAGTGT TTTTTGAAGA TTGATTGAAA     1620

AAATTTCATA GAAAACCTAG GTTTAGCTCC TTGCTACCAC CTTAGACTAA ACAAAAAGGA     1680

GGAAACTAAG CCCTCCTAAA GTTATAGTAA AATGAAATAA GAACAGGATA AATCGATCAG     1740

GACAGTCAAA TCGATTTCTA ACAATGTTTT AGAAGTAGAG GTGTACTATT CTAGTTTCAA     1800

TCTACTATAG GTATTGTTCC ATTCACTACC GTCAATTTTA GCACATAGTC TTCATGAAAA     1860

TATTATATCA TCATAACCAA CCAGATTCTT TCGCGATATT AGCTGCCTCT GTTCGATTAC     1920

CTGCATCTAG TTTCGAAAGA ATATTGGTGA CATAGTTTCG GACTGTTCCG TTGGATAGAT     1980

AAAGTTTGTC TGCAATTTCT TGGTTAGAGA AGCCCTGAGC AATTCCCTTT AAAACTGCGA     2040

TTTCTTGCTC CGTTAATGGA TTGGGATGCA TCATCACCAC TTCCATCAAT TCAGGCGAAT     2100
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1171

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ACTCCTTGCG TCCTTCGAGG ACGGTGTGCA AGGTTTGCAT GAGGTCTGCA ATGTTTCTTT    2160

CTTTTAATAC ATAAGCATCT ACTCCAGCCT TGACCGCACG TTCAAAATAC CCAGGACGCT    2220

TGAAGGTCGT CACCACAACC ACCTTTGTTT CAAGCTTTTC TGCTCGTATC CACTCCAAGA    2280

CTTCAAGACC TGTCTTAACA GGCATTTCTA CGTCAAGGAT GGCGATATCT ACAGACTCCT    2340

TTTCTAATAG TTGGATTGCT TCTTGCCCAT TCTTGGCTTG AAAGACAGAC TCTACATCCG    2400

GTTGAAGCAT GAGCAACTGG CACATGGCAT CTCGCAACAT ACTTTGATCT TCTGCGACTA    2460

ATACTTTCAT CTACTTTCTC TCCTTATAAA GTAGTCGAAC CTGCACTTCA GTTGGATGTT    2520

TCTGACTGAT TACACTTACT TCTCCTGAAA ATGGAAAAAC ACGATTTCGG ACTGTATGGA    2580

GCTCATCCCC GCTTATAGAG GCAAAGCCAC AGCCATCATC TCTCACTGTT AGAATGAGTT    2640

CTTTCTCTGT CCGTTCTAAT TTCAAGTAGA CTTTAGACGC TTTAGCATGT TTGATGATAT    2700

TGGTCACTAA TTCAAGCAAA ATCATGGAAG CCGTTGACTC CAATTCCTGA GTTAAGCTAG    2760

ACTTGTCCAA GTGATTCTCA ACTTGAACCT CAATTCCAGC AATTTCTAAC ATCTTTTTCA    2820

CAGTCTCTAG TTCGGATGTC AAAGTTCTAG ACTTAAGATT TTCCACAATG GTTCGCACTT    2880

CATTCATGGA tCCTTGCTGA TCTGGTGAAT TTCTTTTAAT TCCTTTTCCA CCTGTGGATA    2940

AGCCTCCATC TGAAATAACT GCAAGGCTAA ATCTGTCTTG ACACTCAGCA TAGCAAAGGT    3000

ATGTCCCAGA CTATCATGCA AATCCTGACC GATACGACTA CGTTCATTTT CAGCAAGCAA    3060

TAGATTTATC TGAGCATTTT GCTTGACCTG AGCTTCTTTC AAATCCTCGA CAATACGAAT    3120

CCGAACCAAT CCAAAAGTCA TTAAATCGAC AAAAGTAAGA ATTACAAGTA GATAGAATAG    3180

AAACTCAACT TCGATTCTCT GAAAAATCAA CAGTTGCCCC ACAACAAGGA CTTGAGCAAG    3240

AAGAAAAGTC CAGACATGTA AAGACTTTAA ACTACGTACG CTGAAATGAT AACTTAAGAG    3300

ATTGGATAGG AAAAAGAAAA ACCAGATATA ATTAACAGCA ACAAAGGCAG TATTCCCAAC    3360

TACATAAGTC AGCATGAGGC CCCAATATAG CCAAGATAGG CGCTGGCTCT TAGTTGTTAA    3420

AACACCCAAA TATGCCACTA CAAATAGAAT ATCAATCAAT AAATGCCAGG CAGAAAGCCA    3480

CCCAGTCACT ACAGACAGGA TGGGGAAAAT CATAAAAATT AAACTGATCC AAAACATATA    3540

ATGTATTCTT TTCAGTCTTT CAAGCATTAA GCATTCTCCT TATGACCTTG AAGGTAAATG    3600

GTCAAACCAA ACAAAACTAC TGAAAAAACA AGTAAATAAA CTGTGGCTGA TAGATTGATG    3660

CCACCCTCAT TTAAGAAGGT CTTGAGCAAC TCCATCAACT GATAGGTCGG GAGACACTTA    3720

CCTACTACTT GCATCCAGTC TGGAAATAAA GAGATAGGCA TCCAGAGTCC ACCTAAAACA    3780

GCCAACCCTA GATAAAGAAG ATTGCCCACG ACAGACATCA ACTGACTAGT TGGTAAGAGA    3840
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                                      1172
GTCAAGGTCA AACCAAGCGC TACGAAGGCA ATACTTCCTA CTATCAGCAA AAGTGCAGCC        3900

CCAATCCAAT TTCCAAGAGA CATGTCCACA CCTCTTACAA AATGCCCAAC TGAGAAAACC        3960

ACCAAGATTG AAACCAAATA ATCAACCAGC ATACTTGTTA TCTTTGATAG ATAATATTCT        4020

ACCATATTTA CAGGGCTATG ACGCAATGTT TTCTGCCAGT TGTTGATCTT GTCGGTATGT        4080

AAAACAACTG GGAATGAGAA GATAGCTGTT GACATCATGG AAAATGCAGT CATGGAGATA        4140

AGATAATCAC GCATAAAATT CGCGAGTTCA CCTGGTGTGT CCTGATAGAT ACCAGAAAAA        4200

AATAAATAGA AAGCCGTCGG CATCCCTACT GACAATAGAT AATAGATCAA TTGTCGTTTG        4260

GTCAATAAAA ATTCTATCTT ACTAAGTGCT AGCCATCGTT TCATCTTAGT TATCTCCCTT        4320

CTGCGTTTCT TCAAAGATTG TATCCAACAA ACTACGATTA TTAACTTCAA TTTCTTGTAT        4380

GCCACATCCT GCTTGAACTA ACAGTTCCCA AAAAGCATCT GCTTCGCGTG TGACTACTTG        4440

TAGAGCATCC TGTTTTTGTG ACCAGTTTTC AACCAAGTTA GACTGCTCAA TGACTTCCTT        4500

GTATGCCAGA GGAAGGATAA AATGCTTTTC AATTCCCTCA CTACGCATAG CTAGAGGCGT        4560

CGTATCACGA ATCAACTCTC CCTTATTTAA AACCAAAATC CGGTCAGCCG TATGCTCTAC        4620

CTCTTCAATA TAATGAGACG AATAGAGAAT CGTGACTCCT TGCGCTTTTA GGTCCCGAAC        4680

GATTTCCCAA AAGCGTTGAC GAGTTGAAGT ATCCATGGCA GCAGTTGGTT CATCTAAAAA        4740

GACAAGCTTT GGTCGCCCAA TCAAGGTCAA GACAAAAGAG AAGAGACGCT TTTGCCCGCC        4800

TGACAATTTT TCTGCGAATT GCTCTTTTTG TTGCTGGTCA AACTGCAATA GTTGATCGAT        4860

TTCCTGATCG CTCAAGGAAT TTGGATAGAT ACGTTGAAAG AAAGCAATCA ACTCTTTGAC        4920

CTTTAATTTC TGAACGATGA CATTTTCTTG AGGCAGATAA CCTCTAATAT AGTCTAACTG        4980

AGAACTCGTC ACTGACAAGC CTTGGATGGA TACTTGACCG CTTGTGACCA GTTTATCTCC        5040

AAGCAGACAG TCCAAGAGTG TGGTCTTCCC AGCACCATTG GGCCCAATCA AGGCGACGCA        5100

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ATTTAGGCTT TCTACCTTAA TCATATTCAT GATATTCTCC TTTCAACCAC TCCATTCTCA        5220

TAAGGAAAAC GACGAAAATC ATAAATCCAA ACCCCAAAGC ACCACGAATG AATTGGCGAA        5280

gCAAGGTTTG GTCAAACCAA CCTGTAAACA TTTCCACTAA CCATACCAAG AGTGACAGGC        5340

CGATAAAGAA ATAGATGATC CCTCTCTTCA TTCCTCAAGC TCCTTTTTCA CATCTCCGAC        5400

TAATTTCAAA CCTTCTCTAA CAAGCCAAGA CATCATTCCA AAGCCAGCAA AGAGCTCCCA        5460

AGGAAAATGA TAGAAACTCT CATCCAATCC CGAAAACATG AGTTAGGTCA TAACTCCTGC        5520

TACTACTAAA CTCACTGCGA TAATCATTTT ATTTCTCATC TCTTCTTCCT CCATTTCATA        5580

CTACAATTAT AGTCTTTTGA AATCAGAGGA GACAGAAGCT TCTGTCACTA GAAAATATGA        5640
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1173

CAAATGTCAT AAAAAATTCT GTTCAAAACA AGCAAGATAC ACTATACAAT AAAACACAAT 5700

TAGAAAAATC TAAGGCAACT TCCTCAAAAG AGATATCAAA CCCAATTCAC ACCATAATGT 5760

AAACTAATAC TTATTTAAAA TCAAAAAGAG TAGAAATTTT TATCAGACAA ACACATATAT 5820

AGTGTATTGA ATCTATAACA GTAGGCCTTA AATACTAAAA TATTTCTATA AATTAATTTA 5880

ACTTTCCTGA TAGAGCTGTT CATATCTTAT TTCAATTCTC TAAATTATAC GTTGAACAAA 5940

ACCCTTCTAT TTCTTTCTTA AAGATTTATA AGAGTTATAA AATCTGTTAA ATTTCAATGT 6000

GTATACCTAA ACTACGGTAT TTATTGAAAA GACTGGAGAC AAAAAGTATA CGCTGCCAAA 6060

ATGAATTACT GAAAATCAAA AAAGAGAGAA CCAAACTGAT TCCCTCTTAA TGTATATAAT 6120

ATCTAGTTTT AAAAATACAC ACTCACATAT CTCTGTAATG AATCGGGAAG ACAGGATTCG 6180

AACCTGCGAC ACCTTGGTCC CAAACCAAGC ACTCTACCAA GCTGAGCTAC TTCCCGAGTT 6240

AAATAGAAAA ATGCACCCTA GAGGAGTCGA ACCTCTAACC GCCTGATTCG TAGTCAGGTA 6300

CTCTATCCAG TTGAGCTAAG GGTGCTCCAT ATTATGCCGA GGACCGGAAT CGAACCGGTA 6360

CGATCGTTAC CAATCGCAGG ATTTTAAGTC CTGTGCGTCT GCCAGTTCCG CCACCCCGGC 6420

CTCTCTAAGC GAACGACGGG ATTCGAACCC GCGACCCCCA CCTTGGCAAG GTGGTGTTCT 6480

ACCACTGAAC TACGTTCGCA CTGTTTTCTT CTATCTAAAA ATGCCGGCTA CATGACTTGA 6540

ACACGCGACC CTCTGATTAC AAATCAGATG CTCTACCAAC TGAGCTAAGC CGGCTCATTT 6600

GTTATATCTT AATGCGGGTT AAGGGACTTG AACCCCCACG CCGTTAAGCG CCAGATCCTA 6660

AATCTGGTGC GTCTGCCAAT TCCGCCAAAC CCGCATATAT GACCCGTACT GGGCTCGAAC 6720

CAGTGACCCA TTGATTAAAA GTCAATTGCT CTACCAACTG AGCTAACGAG TCTAAAATAA 6780

cTTGCGTTAC CTTAAACGGT CCCGACGGGA ATCGAACCCG CGATCTcGCC GTGACAAGGC 6840

GACGTG 6846

(2) INFORMATION FOR SEQ ID NO: 199:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2911 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 199:

GAATTCATTT TAAATAAAGA TACGGGAGAG GTAAGTGAAT TAAAACCTCA TAGGGTAACT 60

GTGACCATTC AAAATGGAAA AGAAATGAGT TCAACGATAG TGTCGGAAGA AGATTTTATT 120

1174

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TTACCTGTTT ATAAGGGTGA ATTAGAAAAA GGATACCAAT TTGATGGTTG GGAAATTTCT        180

GGTTTCGAAG GTAAAAAAGA CGCTGGCTAT GTTATTAATC TATCAAAAGA TACCTTTATA        240

AAACCTGTAT TCAAGAAAAT AGAGGAGAAA AAGGAGGAAG AAAATAAACC TACTTTTGAT        300

GTATCGAAAA AGAAAGATAA CCCACAAGTA AACCATAGTC AATTAAATGA AAGTCACAGA        360

AAAGAGGATT TACAAGAGA AGAGCATTCA CAAAAATCTG ATTCAACTAA GGATGTTACA         420

GCTACAGTTC TTGATAAAAA CAATATCAGT AGTAAATCAA CTACTAACAA TCCTAATAAG       480

TTGCCAAAAA CTGGAACAGC AAGCGGAGCC CAGACACTAT TAGCTGCCGG AATAATGTTT       540

ATAGTAGGAA TTTTTCTTGG ATTGAAGAAA AAAAATCAAG ATTAAGATAA AAGCTATAGA       600

AAAAAATGGT TTATGTACTG AGATTAGATA GTGAGGTGAT GACATAGTTT TGTGAAAATA       660

GCCATTTATA ACTCAATTAT TTAGTTTACT TTACTTTACT AGTGATACTA TTTGGAGTTA       720

TTAATGGACT TAGTTTATAT AACTAATGAA TTGATTGAAA GGGTTAGTAT TGACAATATT       780

GGTCATATTG ACTAGAAAAT AGAGTCTATC AAAATTTAAA GGCTAATAGA GGTGATGAGA       840

CAATTTCGGC TCTTTGTCAA CTGTAGTGGG TTGAAGTCAG CTAAGCTCGA GAAAGGACAA       900

ATTTTGTCCT TTCTTTTTTG ATATTCAGAG CGATAAAAAT CCGTTTTTTG AAGTTTTCAA       960

AGTTTCGAAA ACCAAAGGCA TTGCGCTTGA TAAGTTTGAT GAGATTATTG GTCGCTTCCA      1020

GTTTGGCATT AGAATAGTGT AGTTGAAGGG CATTGACAAT CTTCTCTTTA TCTTTGAGGA      1080

AGGTTTTAGA GGATGAACTT GATTCAGATT GTCCTCAATG AGTCCGAAAA ATTTGTCAGG      1140

CTCCTTATTC TGAAAGTGAA AAAGCAAGAG TTGATAGAGA TTATAGTGGT GTTTCAAGTC      1200

TTCTGAATAG CTCAAAAGTT TATCTATAGT AGATTGAAAC TAGAATAGTA CACCTCTGCT      1260

TCTAAAACAT TGTTAGAAAT CGATTTGACT GTCCTGAATG ATTTGTCCTG TTATTATTTC      1320

ATTTTACTAT AAATCCACGT TTACGAATCT CTTTCCACAC TTGTTCAATG GGGTTCATCT      1380

CTGGTGTGTA TGGAGGAATA AATGCAAAAC CAATATTAGT CGGAATCTTT AAGGTACTTG      1440

ATTTATGCCA TATAGCATTG TCCATAACGA GTAAAAGATA ATCATCTGGA TAAGCTTGTG      1500

AAAGCTCCTA TTCCTAAAGC CCCTTTATAA CCTCTTGCGA GAGAGACTAT TGACTCAGCC      1560

CTTACTTCAT GCGGATGAAA CTTCTTATCG GGTTCTAGAG AGTCATAGCC ATCTGACCTA      1620

CTATTGGACC TTTTTGTCTG GGAAAGTTGA GAATCAAGCA ATCACGCTGT ACCATCATGA      1680

TCAGAGTCGG AGTGGTTCGG TAGTACAAGA ATTCCTAGGA GATTATTCTG GCTATGTTCA      1740

TTGTGATATG TTGCGGCAGT AACTTAGGAC TTTAGTCCTC TAGTTCTGCC TATGCGATAG      1800

CAGTCCAAGG TTTAGGAGCA AGGCGACGCT AAGCTTGGTA AACTGCGAAC CGCTAGAAGC      1860

TTATCGTCAA CTGGAAGAAG CTGAACTTGT TGGATGTTGG GCGCATGTGA GAAGGAAATT      1920
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1175

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TTTTGAAGCG ACCCCCAAGC AAGCAGATAA ATCATCCTTA GGAGCTAAAG GTTTAGCTTA      1980

TTGTGATCAG TTATTTTCCT TGGAAAkAGA CTGGGAGGCT TTGCCAGCTG ATGAACGACT      2040

ACAGAAACGT CAAGAACATC TCCAGCCCCT AATGGAAGAC TTCTTTGCTT GGTGCCGCCG      2100

TCAGTCAGTT TTAGCAGGTT CAAAACTAGG AAGGGCAATT GAATACAGCC TCAAGTATGA      2160

AGAAACCTTT AAGACTATTT TGAAAGACGG ACATCTGGTC CTTTCCAATA ATCTAGCTGA      2220

ACGCGCCATT AAATCATTGG TTATGGGACG GAGTAAAAGA GTCCAGTGGA CTCTTTTAGC      2280

CTGAGCTCAG TTTAAAAAAG CGAGGGTGGT TATTTTCTCA AAGTTTTGAA GGAGCTAAAG      2340

CAAGAGCTAT TGTTATGAGC TTGTTGGAAA CAGCTAAACG TCATCAATTA TAGTGCGTTG      2400

AATCTATAAC AGTACGCATC GACTGCTAAA ACATTTCTAT AAATCAATTT TCCTTTCCTA      2460

ATCGATTTGT TCATATCTTA TTTCAATCCA TTATAAATAG CGAGAAATAT CTATCCTATC      2520

TTCTAGAATG TCTTCCAAAC GAGGAAACTC TCGTAAACAA AGAGGTTTTA GAGGTTTATT      2580

TACCATGGAC TAAAGTTGTA CAAGAAAAGT GCAAATAAGA AATCTCCAGA TTAGGAACTA      2640

TCCGTGAGTT CACTAATCTG GAGATTTTTC AATAGAtTCG TTATTGGGCG GTTACGATAT      2700

GATcACTACT TCGTCAGTCT TATCTACAAC CTCAAAACAG TGTTTTGAGC AACCTGCGAC      2760

TAGCTTCCTA GTTTACTCTT TGATTTTCAT TGAATATTAG AACAGAAAAA ATGCTTGGAG      2820

TATTTGTTTG TGTGTTATT TTTATATAAC AAACTATAAA CAAAATAAAA ATATAAAAAA      2880

AGAGACAAAA AAGAACAGAA AGTAATTGAC A                                      2911
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(2) INFORMATION FOR SEQ ID NO: 200:

       (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 6854 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 200:

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GAAAATAAGT CTTGACAGAA AGCGCTATCA ATGATAGAAT GAATTCAGAT AAAAAGATTT       60

ATTTTTAAAA CAAAAATGAA ACGTTTCAAA AAAAGAAATA AAGAGACAGC GCCAAGCGCT      120

ATCTTTTCTA GAAAAAAATG AAACGTTTCA AAAAAGGAGG TTGCTATGAA TAGCAAAGCG      180

AAGCAAGTTT CTCTTTGGGA AAGAATCAAG AAACAAAAAC TCTTGTTATT GATGACTGTC      240

CCCGGTTTAG TTTTAACCTT TATCTTTAAA TACATCCCTA TGTATGGGGT TTTAATCGCA      300

TTTAAAGATT ACAATCCTTT AAAAGGAATT TTAGGGAGTG ATTGGATTGG TTTTTCTGAG      360
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1176

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TTTACAAAAT TCATATCCTC TCCCAACTTT GGTATCTTGT TAGCCAACAC ATTAAAATTA      420

AGTATCTATG GTTTATTGCT TGGCTTTTTA CCACCAATCA TTCTCGCGAT TATGCTCAAT      480

CAACTCTTGA GTGAAAAAGT CAAAAAACGA ATTCAGCTCA TTTTATACGC ACCAAACTTT      540

ATCTCAGTCG TTGTTATTGT CGGTATGATT TTCCTCTTCT TTTCAGTGGG AGGACCAATC      600

AACAATTTTC TTTCTATGTT TGGAATGAAG GCTGACTTCT TGACAAATCC AGACTTCTTT      660

AGACCTTTAT ACATCTTTAG TGGTATCTGG CAAGGAATGG GCTGGGCTTC AACGCTCTAC      720

ACGGCAACAT TGGTAAATGT AGATCCAGCC TTAGTAGAAG CAGCCCGACT GGATGGAGCC      780

AAATATCTTCC AACGAATCTG GCACATTGAT ATTCCAGCTC TTAAGCCTAT TATGGTTATC      840

CAATTTGTTT TAGCTGCAGG TGGAATTATG AATGTCGGAT ATGAAAAAGC ATTCTTGATG      900

CAGACATCGT TAAATTTGCC AACTTCTGAA ATTATCTCGA CATATGTCTA TAAAGTTGGT      960

CTTGTATCAG GAGACTATTC TTACTCAACA GCGGTTGGTT TGTTTAATGC AGTGATTAAC     1020

GTAGTATTGC TTGTTGCAGT TAACCAAATC GTTAAACGCA TGAATAATGG TGAAGGAATT     1080

TAAGGAGGAA AGTATGAAAA ATTCGATTAT GGATACAAAA TTTGATAGAC GTATCTTACT     1140

CTTAAATAAA ATCATTATTG TCTTTATCGT TTTGATGACT TTGCTTCCTT TACTTTATAT     1200

CGTCGTAGCA TCCTTTATGG ATCCTAAGGT TCTGGTTAGT AGAGGGATTA GCTTTAATCC     1260

AGCCGATTGG ACTGTAGAAG GTTACCAGCG TGTATTCAGT GACCAATCTA TTCTAAGAGG     1320

TTTTATCAAT TCTCTACTAT ACTCTTTTGG ATTTGCAGCT TTAACAGTCT TGCTATCTGT     1380

GTTTACAGCT TATCCTCTTT CTAAGAAAGA CTTGGTTGGA CGTCGTTGGA TTAACTACTT     1440

CTTGATTGTA ACTATGTTCT TTGGTGGTGG TTTAGTCCCA ACTTACTTGC TCGTAAAAGA     1500

ATTGGGAATG CTCAATACTC CATGGGCTAT CATTGTTCCA GGTGCTGTTA ACGTTTGGAA     1560

TATTATTCTT GCTAGGGCCT ATTTCCAAGG ATTGCCTGAA GAATTAGTTG AAGCTGCTGT     1620

CATTGATGGT GCAAATGATT TACAGATTTT CTTCAAAATC ATGCTTCCTC TTGCAAAACC     1680

AATTATGTTT GTTCTCTTCC TTTATGCTTT TGTAGGACAG TGGAACTCAT ACTTTGATGC     1740

AATGATTTAT ATCAAGGATC CAAACTTGGA ACCATTGCAA CTTGTACTTC GTAAAATTCT     1800

CATTCAGAGC CAACCAGGTC AAGACATGAT TGGAGCACAA GCGGCTATGA ATGAAATGAA     1860

ACGTTTAGCT GAATTGATTA AATACGCAAC TATTGTCATT TCCAGCTTGC CATTGATTGT     1920

TATGTATCCA TTCTTCCAAA AATACTTTGA TAAAGGAATT ATGGCTGGTT CACTTAAAGG     1980

ATAAAAAAAG AAAAAATAAA AGGAGTTTTC TCATGAAATT CAAAACATTC TCAAAATCAG     2040

CAGTTTTGTT GACAGCTAGT TTAGCAGTAC TTGCAGCCTG TGGCTCAAAA AATACAGCTT     2100

CAAGTCCAGA TTATAAGTTG GAAGGTGTAA CATTCCCGCT TCAAGAAAAG AAAACATTGA     2160
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1177

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AGTTTATGAC AGCCAGTTCA CCGTTATCTC CTAAAGACCC AAATGAAAAG TTAATTTTGC    2220

AACGTTTGGA GAAGGAAACT GGCGTTCATA TTGACTGGAC CAACTACCAA TCCGACTTTG    2280

CAGAAAAACG TAACTTGGAT ATTTCTAGTG GTGATTTACC AGATGCTATC CACAACGACG    2340

GAGCTTCAGA TGTGGACTTG ATGAACTGGG CTAAAAAAGG TGTTATTATT CCAGTTGAAG    2400

ATTTGATTGA TAAATACATG CCAAATCTTA AGAAAATTTT GGATGAGAAA CCAGAGTACA    2460

AGGCCTTGAT GACAGCACCT GATGGGCACA TTTACTCATT TCCATGGATT GAAGAGCTTG    2520

GAGATGGTAA AGAGTCTATT CACAGTGTCA ACGATATGGC TTGGATTAAC AAAGATTGGC    2580

TTAAGAAACT TGGTCTTGAA ATGCCAAAAA CTACTGATGA TTTGATTAAA GTCCTAGAAG    2640

CTTTCAAAAA CGGGGATCCA AATGGAAATG GAGAGGCTGA TGAAATTCCA TTTTCATTTA    2700

TTAGTGGTAA CGGAAACGAA GATTTTAAAT TCCTATTTGC TGCATTTGGT ATAGGGGATA    2760

ACGATGATCA TTTAGTAGTA GGAAATGATG GCAAAGTTGA CTTCACAGCA GATAACGATA    2820

ACTATAAAGA AGGTGTCAAA TTTATCCGTC AATTGCAAGA AAAAGGCCTG ATTGATAAAG    2880

AAGCTTTCGA ACATGATTGG AATAGTTACA TTGCTAAAGG TCATGATCAG AAATTTGGTG    2940

TTTACTTTAC ATGGGATAAG AATAATGTTA CTGGAAGTAA CGAAAGTTAT GATGTTTTAC    3000

CAGTACTTGC TGGACCAAGT GGTCAAAAAC ACGTAGCTCG TACAAACGGT ATGGGATTTG    3060

CACGTGACAA GATGGTTATT ACCAGTGTAA ACAAAAACCT AGAATTGACA GCTAAATGGA    3120

TTGATGCACA ATACGCTCCA CTCCAATCTG TGCAAAATAA CTGGGGAACT TACGGAGATG    3180

ACAAACAACA AAACATCTTT GAATTGGATC AAGCGTCAAA TAGTCTAAAA CACTTACCAC    3240

TAAACGGAAC TGCACCAGCA GAACTTCGTC AAAAGACTGA AGTAGGAGGA CCACTAGCTA    3300

TCCTAGATTC ATACTATGGT AAAGTAACAA CCATGCCTGA TGATGCCAAA TGGCGTTTGG    3360

ATCTTATCAA AGAATATATT GTTCCTTACA TGAGCAATGT CAATAACTAT CCAAGAGTCT    3420

TTATGACACA GGAAGATTTG GACAAGATTG CCCATATCGA AGCAGATATG AATGACTATA    3480

TCTACCGTAA ACGTGCTGAA TGGATTGTAA ATGGCAATAT TGATACTGAG TGGGATGATT    3540

ACAAGAAAGA ACTTGAAAAA TACGGACTTT CTGATTACCT CGCTATTAAA CAAAAATACT    3600

ACGACCAATA CCAAGCAAAC AAAAACTAGA GGTTGATTAT GGGAGATAAG AAATACACAG    3660

TAGAAAAAGC CAATCGTTTT ATAGCAGAAA ATAAACATCT CGTTAATACT CAATATAAGC    3720

CTGAAGAACA TTTTTCAGCT GAGATTGGTT GGATCAATGA TCCAAATGGA TTTGTCTATT    3780

TTCGTGGAGA ATACCATCTC TTTTATCAAT TCTATCCATA TGATAGTGTT TGGGGGCCTA    3840

TGCACTGGGG ACATGCTAAA AGTAAGGACT TGGTGACTTG GGAGCACTTG CCAGTGGCAC    3900
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                                    1178
     TTGCTCCTGA CCAAGATTAT GACCGAAATG GTTGTTTCTC AGGCTCTGCC ATTGTCAAGG    3960

     ATGATCGCCT CTGGCTCATG TACACTGGAC ATATCGAAGA AGAAACCGGT GTCCGCCAAG    4020

     TGCAAAATAT GGTATTTTCA GATGACGGGA TTCACTTTGA AAAGATTTCC CAAAATCCAG    4080

     TTGCAACTGG ATCAGACTTA CCAGATGAGT TGATTGCTGC TGATTTCCGT GATCCAAAAC    4140

     TCTTTGAAAA AGATGGACGC TATTACTCCG TAGTAGCTGC CAAACACAAG GATAATGTGG    4200

     GCTGTATCGT TCTACTAGGG TCCGATAACC TAGTAGAATG GCAGTTCGAA TCCATCTTTT    4260

     TAAAAGGGGG AGAACACCAA GGTTTTATGT GGGAATGCCC AGATTACTTC GAGTTAGATG    4320

     GGAAAGATTG CCTTATTATG TCACCCATGC GTTATCAGCG TGAGGGAGAC TCATATCATA    4380

     ACATCAACTC ATCGCTTTTG TTCACGGGTA AGGTAGATTG GAGAGAAAAA CGTTTTATCC    4440

     CAGAATCAGT TCAAGAAATT GATCATGGCC AAGACTTCTA TGCGCCTCAA ACATTGTTGG    4500

     ACGATCAAAA TCGTCGTATC CTGATTGCTT GGATGCAGAC ATGGGGGCGT ACCCTTCCAA    4560

     CCCATGACCA AGAACACAAG TGGGCATGTG CCATGACTCT ACCTAGAATT CTAAGATTGG    4620

     AAGATGGCAA ACTAAGACAA TTCCCTGTTA AAAAAGGCCA ATATCAAATC CAAATAGATA    4680

     AAGATTGTCA TTACCACTTA GGAAATGATA TAGATTATCT TGAATTTGGT TATGACAGTA    4740

     ATGCGCAGCA AGTTTACATT GATCGTAGCC ATCTTATTCA AAAAATTCTA GGTGAAGAAG    4800

     AACAGGACAC TAGTCGACGG TATGTAGATA TTGAAGCTAA AGAATTGGAA GTTGTTCTAG    4860

     ATAAAAATTC CATCGAGATT TTTGTCAATC AAGGTGAAGC AAGCTTGACT GCAACTTATT    4920

     ACTTAACGGT GCCAGCTGAG CTATCACGAA TTGATTAAAA ATTAAGTTAT TTCTCCTAAA    4980

     GAAAAAGTTC TCTTTCTAAA ATAGTGGAAA GAGGACTTTT TGTGTTTTGG GTATATAAGC    5040

     TTAGTTTATG GTATTTGTAA AATTGGTGTT GGATTATGAT TTAAGCTAGT TTTCTAAAGA    5100

     ATTTGAAAAA AATTTTATTT AAGCAAAAAA ACCTTGGTTC CAAGGCTTTT CCTGTTGTAT    5160

     TTAGATGCCC CCTACAGGGA TTGTAGGAGA TATGTTGCTT AGATGTTCTT GATTTTCTGG    5220

     TGTTTTGTAA CGTTTAAATG AGTTTTTTGA GTTTGTTGGT GGGGCGTTGC CCGGCAATTG    5280

     CCCGACTTAT TGCTTGAAAA AGAATTTAAA ATATAGTATA GTTAATTATA GATTAACACT    5340

     TGCTTGGAGG AACTGATGAA GAACAATGAA AGATTAGGTA TTAAATTAAG TAGAGATAGC    5400

     GTTTTAGGAT TGAGGGAAGT TAGAAGGCTT TATTTAGGCA GTTCAGATAT CCCAGTTTCT    5460

     GATGGCTATG TGATTGAAGT TGCTTATAAC CAGATATCAC ATGAGATTGA TATTATTGAT    5520

     TGGGTAGAGT TGAACAAGTC AAAAATTAAG ATAAGTGAAA TTAGTGAAAG CGTGGATATA    5580

     GATGCCACTA GCTTGAGAAC AACTTTGACT TTAGACACAT TAGTATATGA AGGTATGAGA    5640

     GATATACAGT TAAAGTTGAG AGAGCTTACA AAGGGGAGAG TATTCTTTTC ATTTGTAGTG    5700
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1179

AAGTTAGTTT TGTTTGCTTC TATTTTAAAG AAAAAAGATT TACTAGAAAA ATTTCAAGAA   5760

AAGTGTTAAT CAAGTATTGA CACTTTATCT GGATTTCGGT ATAATATGCT TAGAAAGGAA   5820

TCTTTCTAAA TTTTTTTCGT CCTTATGTGT TAATCAAAGA CGAATACAAA AACATATTTT   5880

TTTACTCTAA AAAGTGTTAA TCAATGATGT ATTTGTTAGA GAGGTAGATA AATGGAATTG   5940

AGAGCACCAC CAGTTATAAT AGTATAAAAC GTATAATAAA AATATTTTAA CTTGAATTAT   6000

AGAAAAGGAG AAACAAATCA TGAAACAAAA ACAACCGATT GTTTCTAGAA CGAAACAACA   6060

TACATTTGAA GAGCTTATTC AAGACCAAAA GTTAGAAAGA TTGGCTAAGT TGTCGCCCGA   6120

TTTGGTTGGA AGGTATGGTT TTACTGCTAG CTGTGCGTCT TCATTTGCGA ACTTGATTAA   6180

AGAAGCGTAT GGGGGTAAAA ATCTAAACGT AGTTTATGCG AGTCGGATGT TGGCTCTCTG   6240

GAATATTGCT TGCAGTTGTT ATCATAAGGC TGATGGGTAT TCTTTAGCAG ATGCGCTTTT   6300

TAGTGATAAA AAAATTTGTC TAGATTCTTA CTATTACCAC AAGAATACCT CTAATACCAT   6360

AACTAGTGAT GTGATAAAAG ATGTTTACGA TAATTATAAT AATTATATGG TTTTAACTCG   6420

AGAAGCGACA CCTGAATACA TTTATGTTGT ACAAACTGAA ATGCCAAAAG ATTCAGATTT   6480

ATATTTTTAT ATTAGAGAAG TTCTGGGATT ATCGTTTAGT ACCATGCATT ATGCATTTTT   6540

AGTCAAGGTT CTTGCAGGAG CGCTTGCTAG AAAATATAAG CCATATCGAA ATTGAATTAT   6600

TTAAATTTAT ACTCTTCGAA AATCAAATTC AAACCAAGTC AGCTTCGCCT TGCTGTACTC   6660

AAGTGCTGTC TGTGGCTAGC TTCTTAGTTT GCTTTTTGAT TTTCATTGAG TATTACTCTT   6720

ATGGTAGTTA TTTATGGCAT AATAATATTG ATTTGGGAGT TATAGCGAAA ATTTTAGGTT   6780

CTATAATATT TGTAGTGGGT AAACCACTAT AGATATTATG GAGCCTATTT ATTGTAGAAA   6840

AAAGTCCCAT ATGA   6854

(2) INFORMATION FOR SEQ ID NO: 201:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 3895 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 201:

TCCTTGCTAA GTTTATACTC AATGAAAATC AAAGAACAAA CTAGGAAGCT AGCCACAGGT   60

TGCTCAAAGC ACCGCTTTGA GGTTGCAGAT AAAACTGACA CGGTTTGAAG AGATTTTCGA   120

AGAGTATTAA TTTACATAAA TAGCCAGTGT TTGATAGGGT TTGAGTAGAA TTTTCTCAGA   180

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                                  1180
CACTTCTGCA TCTTCATAGT TTGATATCAA AATCTGTCCA TTTTGGTAGA CTGCTGGCAA      240

GTCGATTTcA CTTCTTTAGC ATAAAAGTTA TTGAGCACTA GTAACTTTTG ATCCTCAAAC      300

TGGCGTTCAA AAGCGTAGAC TTGTTTGCTA TCTTCAAAGG CTGGTTTGTA ACTTCCTTCT      360

GAAATGATTG GCATTTCCTT ACGCATCGAA TCAAGTCTTG ATAGAAGGTA AAAATCGGAC      420

CCTGGATTTC ATTTTCTACA TTGATGTATT TATAGGATTT ACCAGCTTTC AACCAAGGAG      480

TGCCTGTTGA AAATCCTGCA TTTTCCGAAG CATCCCACTG CATGGGAATG CGTGAATTAT      540

CACGCGACTT AGCTTGAATA ATCTGGAAGG CTTCTTGCTG ACTCTTTCCT TCTTCTAAGA      600

GCATCTGATA GGCATTAAGC GATTCGACAT CCACATAATC AGCCATAGAA TCATAGTCTG      660

GGTCAATCAT CCCGATTTCC TCACCCATGT AGATATAAGG TGTCCCACGT GACAGGTGAA      720

TGCTGGCTGC TAGCATGGTG GCTCCTTCCT TGCGGAAGTT TTGAATATCG ACAAAACGGT      780

TCAAGGCACG TGGTTGATCG TGATTATTCC AAAAGAGGGC ACTCCAACCG TCTTTATCAC      840

TCATTTCCTT ACCCCAACTA TGGTAAAGAC TCTTCAACTC TTCAAAATCA AAGGGAGCCA      900

AGGTCCACTT TTGTCCATCC TTATAGTCCA CCTTGAGGTG ATGAAAATTA AAGGTCATGG      960

ATAATTCCTG ACGATCAGGC GACGAATAGA GGACACAGTT TTCCATGGTG GTAGAAGACA     1020

TTTCCCCAAC TGTCATAAAG CTATCGTCGG ATCCAAAAGT GGCTTGGTTC ATCATACGCA     1080

AATAGTTATG AACGATGGGT TTGTCTGTAT AAGCTGGCTT CCCTTCATTT TCAGGACAGT     1140.

CCACTGAAAC CTCGTCCTTA CCGATCAAAT TGATCACATC AAATCGGAAA CCTTTGACAC     1200

CCTTGTCGCG CCAGAAATTA ACAACCTTGA AAAGCTCCTT ACGGACATTG GAATTGCGCC     1260

AGTTAAGGTC AGCCTGGGTC TCATCAAATA GGTGAAGATA GTATTTCCCA GTATCCCCGA     1320

AAGGCGTCCA TGCAGAACCA CCAAACTTAG ACTGCCAATC TGTTGGTTGG TCTTGGATGA     1380

AGAAAAAGTC TTGATAATAC TTATCACCAG CTAGGGCTTT CTGAAACCAT TCATGCTCTG     1440

TCGAACAATG ATTAAGTACC ATGTCCAGCA TAAAGTCAAT CTTGTGCTCT TTACCGACAC     1500

ACACCATTTT CTCAAAATCA GCCATATCAC CAAAAAGAGG ATCCACTGCC ATATAATCTG     1560

AAATATCGTA ACCATTATCC CGTTGAGGGC TTGGATAGAA TGGATTGAGC CAGACCATAT     1620

CCACACCTAG TTTGGCTAAA TAGGGAATTT TTTCGATAAT CCCACGGAAA TCCCCAATAC     1680

CGTTTTCAGT GGTGTCTTTG TAAGATTTTG GATAGATTTG ATAGACTACT TTTCCTTTAT     1740

CAAGTGTCAT CTGTTTCTCC TTTTCTGATA AAAGGGAGGA AGCAGTCTTC CGTCCCTATT     1800

TGTGCTATTT CAATTATACT CAATGAAAAT CAAAGAACAA ACTAGGAAGC TAGCCACAGG     1860

TTGCTCAAAA CACTATTTTG AGGTTGCAGA TAGAGCTGAC GTGGTTTGAA GAGATTTTCG     1920

AAGAGTATTA GATTCGTGTA GCGACCATGA GAGATGCTCC AGCTTGGATC GTTGTCGGAT     1980
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1181

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AAGTTCCGGG AATAGTCGCT GTATAAGCAT CTTGGTTGGT GATGATAACA GGAGTTTCTG    2040

TCACCAGACC TGCAGCCTTA ATGACATCCA TATCAAAACG AATCAGTTGC TGACCAACTG    2100

TAACGTGATC TCCTTGGACT ACAAGACTTT CAAAACCTTT GCCATCAAGA CCTACTGTAT    2160

CCATACCGAT GTGGATGAGC AATTCAACTC CCTCGTCAGA GACAATGCCG ATGGCATGCT    2220

TGGTAGGGAA AAGAACCGTC ACTGTCCCAT TAACTGGAGA GGTCAACTCA CCTTGGCTTG    2280

GTTCAATGAC TAGACCTTGC CCCATGACAC CTGATGCAAA AATAGGATCC GTCGCTTGAC    2340

TCAATTCTTT CACTTGGCCA GTTAGTGGGC TGATAATTTC TACCGAAGTA AGTTCTACTG    2400

GTTCATGGTT CACAAATTCT GCTTCTTCTT GAGCAACGAA TTCTGCCTGC AAGTTCGTAT    2460

CGCCCTCTGT TTTTGTAAAG AGACCAGCCT TGCGGAAGAA GAAAGTCAAG AGCATTGGAA    2520

CAACAATCGC AACTAGCATA GTTCCTGCAA ATGGCAGCAT GTATTGAGGT TGAATAGAGA    2580

GAATACCTGG CAAACCACCG ATACCAATAG AAGCCGCAGT TACATTAAAA GTAACGGATA    2640

ACATGCCTGC AAGGGCTGAA CCAGTCATCC CAGCAACAAA TGGATAAATA TATTTTACGT    2700

TAACCCCAAA AAGAGCTGGT TCTGTAACAC CGAGATAGGC TGAAATGGTT GCAGGAAGTG    2760

AAACCTGAGC CTCACGCTCA TCATGGCGAT GCATGAAATA ATAGGCAAAC ACGGCTGAGC    2820

CTTGAGCAAT ATTAGAAAGA GCAATCATTG GCCATAGGGC AGTGCCACCA GCATCCGCAA    2880

TCAATTGTGT ATCAATGGCA TTGGTCATAT GGTGCAGACC TGTGATGACA AATGGAGCGT    2940

AGAGGGCGCC AAAAATTGCA CCGAAGAGCC ATTTAACTGG ACCAGTTAAA CCTGCCAAGA    3000

CAACTGATGA AAGTCCTTGT CCAATTGTCC AACCGATTGG TCCCAAAACA GTATGAGCCA    3060

AAATCAAGGC TGGAATCAAT GACAAGAAAG GTACAAAAAT CATAGAAATG ACTTCTGGGA    3120

TATGCTTGTG CCAGAAGATT TCAAGATAAG ACAGACTCAA ACCTGCAAGC AAGGCTGGGA    3180

TAACTTGGGC TTGGTAACCG ATACGATTAA CAGTAAAATA GCCAAAATTC CAAACCCAGT    3240

TTGCCGCGAT ATCAGCTGCT GGCGTTGAAG CAACCGCATA GGCATTGAGC AACTGAGGCG    3300

ATACCAAACA GATTCCGAGA ACAATTCCCA AAATTTGGCT GGTTCCCATC TTACGAGAAA    3360

CAGACCAAGT AATCCCTACT GGTAAGAACT GGAAGATAGC TTCACCAGGC AACCAGAGGA    3420

AGTGATTGAC ACCTGCCCAA AACTGAGAGG ATTCTGTGAT GGTCTTGCCA TCCAACATCG    3480

ACCAATGGAC ACCTTCCAAG ACATTACGGA AACCGAGGAT CAATCCTCCG ACTATCAAGG    3540

CTGGAATAAT CGGAGTAAAA ATCTCCGCCA GAGTGGTCAT AACACCTTGG ACCACGTTTT    3600

GATTACTCTT AGCTGCAGAC TTGGCTGCTT CTTTGGAAAC ACCCTCAATA CCTGAAACGG    3660

CTGTAAAATC ATTATAAAAG ATGGGCACGT CATTTCCAAT GATTACCTGA AATTGACCTG    3720
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1182

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CATTTGTAAA GGTTCCTTTA ACAGCTGGAA TTGACTCGAT AGCTTTAACA TTAGCCTTCT        3780

TATCATCTCC TAAAACAAAC CGCATCCGTG TCGCACAGTG AGTTACGGCA GTCACATTTT        3840

CTTTGCCTCC GATTGCCTGA AGCAGATCTT TGGCTTCTTG TTCAAATTTT CCCGG            3895
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(2) INFORMATION FOR SEQ ID NO: 202:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3936 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 202:

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AGGATCGCCG CTCCAGCTAC TAAGTCTCGT GCAGTGCCGA TTTATCAAAC AACATTTTTT         60

GTTTTTGATG ACACGTAGGA AGGTGCCGAT CTGTTTGCCT TGAGGAAACC AGGGAACATT        120

TATACTCGTA TCACCAATCC TACAACAGCT GCCCTTGAAG GTGGTGTTGA AGCGCTAgcA        180

ACAGCATCAG GTATGACTGC AGTGACTTAT ACGATTTTGG CGATTGCCCA TGCTGGTGAC        240

CATGTAGTGG CTGCTTCGAC TATTTACGGT GGAACCTTCA ATCTTTTGAA AGAACCCCTT        300

CCTCGTTATG GTATCACAAC AACCTTTTTC GATATTGATA ATTTGGAGGA AGTAGAAGCA        360

GCTATCAAAG ACAATACCAA GCTTGTCTTG ATTGAAACCT TGGGTAACCC CTTGATTAAT        420

ATTCCAGACC TGGAAAAACT GGCAGAGATT GCTCATAAAC ATCAAATCCC ACTTGTGTCA        480

GACAATACTT TTGCAACACC TTATTTGATT AACGTCTTCT CTCATGGCGT TGACATTGCC        540

ATTCACTCTG TGACTAAGTT TATCGGTGGG CATGGTACAA CTATTGGAGG AATAATTGTC        600

GATAGTGGTC GTTTTGACTG GACGGCTTCA GGGAAATTCC CTCAATTTGT TGACGAGGGT        660

CCAAGCTGCC ACAATTTGAG CTATACTCGT GATGTGGGTG CAGCAGCCTT TATTATAGCT        720

GTTCGAGTTC AATTGCTTCG TGATACAGGT GCAGCCTTGT CACCATTCAA TGCTTTCCTC        780

TTGCTACAAA GACTTGAAAC CTCTTCACTT CGTGTGGAAC GCCATGTACA AAATGCTGAG        840

ACAATTGTTG ATTTTCTTGT CAACCATCCT AAGGTAGAAA AGGTAAATTA TCCAAAACTT        900

GCAGATAGTC CTTATCATGC CTTGGCTGAG AAATACTTGC CAAAAGGTGT CGGTTCAATC        960

TTTACCTTCC ACGTCAAAGG TGGCGAGGAA GAAGCACGCA AGGTCATTGA TAATTTAGAA       1020

ATCTTTTCTG ACCTTGCAAA CGCGGCAGAT GCTAAATCGC TTGTTGTCCA TCCAGCAACA       1080

ACCACTCACG GTCAATTGTC AGAAAAAGAC CTAGAAGCAG CAGGTGTCAC ACCAAACTAA       1140

ATTCGTTTGT CAATCGGTCT TGAAAATGTA GAAGATTTGA TTGAAGACTT GCGCTTGGCC       1200

TTGGAAAAAA TTTAAAGTAA AAGAAGATAA ACAGTGGGCT TCGACTCACT GTTTTTGATT       1260
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1183

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TTCCCTCAGG CATGATATAA TGGTTACAGA AGTCTAGAAA GAGGAACGAT ATGAACGAAA      1320

TCAAATGTCC CAACTGTGGG GAAGTCTTTA CAGTAAATGA GAGTCAGTAT GCCGAACTCT      1380

TGTCCCAAGT GAGAACGGCA GAGTTTGATA AGGAACTACA CGATAGGATG AAGCAGGAAC      1440

TGGCCTTGGC TGAGCAAAAG GCCATGAATG AGCAACAGAC TAAACTGGCT CAGAAGGATC      1500

AAGAAATTGC GCAATTACAG AGTCAGATCC AAAACTTTGA TACAGAAAAA GAATTGGCCA      1560

AGAAAGAGGT TGAACAGACA AGCCATGAGG CTCTCTTGGC TAAGGACAAG GAAGTACAGC      1620

TCTTAGAAAA TCAGTTGGCT ACCTTGCGTT TGGAGCATGA AAATCAACTA CAAAAGACCC      1680

TTTCTGACCT AGAAAAAGAA CGGGATCAGG TTAAAAACCA ACTACTTTTG CAGGAAAAGG      1740

AAAATGAATT ATCTTTGGCT TCTGTTAAGC AAAACTACGA AGCCCAGCTC AAGGCAGCTA      1800

GTGAACAAGT CGAGTTTTAT AAGAATTTTA AGGCTCAACA ATCTACAAAA GCGATTGGGG      1860

AAAGCCTAGA ACAGTATGCA GAGAGTGAGT TTAACAAGGT TCGTAGTTTC GCCTTTCCAA      1920

ATGCTTACTT TGAGAAGGAT AACAAGGTCT CTTCGCGTGG GTCTAAAGGG GACTTTATCT      1980

TCCGTGAGTG TGATGAAAAT GGAGTTGAAA TCATTTCTAT CATGTTTGAG ATGAAAAACG      2040

AAGCGGACGG AACAGAGAAG AAGCACAAGA ATGCAGATTT TTACAAGGAA TTGGACAAGG      2100

ACCGTCGGGA GAAGAACTGT GAGTATGCCG TTTTGGTGAC CATGCTTGAG GCTGATAATG      2160

ACTACTTTAA CACAGGGATT GTTGACGTCA GTCACGAGTA TGAAAAAATG TATGTTGTTC      2220

GTCCTCAATT CTTTATCCAA TTGATTGGTC TCTTACGTAA TGCGGCGCTA AATTCCCTAA      2280

AATACAAGCA GGAGTTGGCC TTGGTTCGCG AGCAAAATAT TGACATTACG CATTTTGAGG      2340

AAGATTTGGA TGCCTTTAAG CTAGCTTTTG CTAAGAACTA TAATTCAGCT TCGACTAACT      2400

TTGGAAAAGC TATTGATGAA ATCGACAAGG CCATCAAACG CATGGAAGAG GTTAAGAAAT      2460

TCCTGACCAC ATCTGAAAAC CAACTCCGTT TAGCTAACAA CAAATTGGAA GATGTCTCTG      2520

TTAAAAAATT GACCCGGAAA AATCCAACAA TGAAAGCGAA GTTCGAAGCA CTGAAGGGGG      2580

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ATGATGCGGT TTTTAAACTG CGTAAGATTT TGGGAACCAA GAAAATTGGT CATGGTGGAA      2700

CCTTGGATCC GGATGTGGTG GGTGTTTTGC CGATTGCGGT TGGCAAGGCG ACACGCATGG      2760

TCGAGTTTAT GCAGGACGAG GGTAAGATCT ATGAGGGGGA AATCACTCTG GGCTATTCCA      2820

CGAAGACTGA GGATGCTAGT GGGGAAGTGG TCGCAGAAAC CCCTGTTTTG TCTCTCTTGG      2880

ATGAAAAGCT TGTTGATGAA GCGATTGCTA GCTTGACTGG GCCTATTACT CAGATTCCCC      2940

CTATGTATTC GGCAGTTAAG GTTAATGGTC GCAAGCTCTA TGAGTATGCG CGTGCTGGTC      3000
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1184

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AGGAAGTGGA GCGTCCAGAA CGTCAGGTGA CCATTTATCA ATTTGAGCGA ACAAGTCCGA      3060

TTTCTTATGA TGGCCAACTT GCCCGATTCA CTTTTCGTGT AAAATGCAGT AAAGGGACGT      3120

ACATCCGTAC TTTGTCAGTT GATTTGGGTG AAAAGCTTGG TTATGCGGCT CATATGTCCC      3180

ATTTGACTCG TACTAGTGCT GCTGGCTTAC AATTAGAAGA CGCTCTTGCC TTGGAGGAAA      3240

TTGCTGAAAA AGTAGAGGCT GGGCAATTAG ATTTTCTCCA TCCTTTAGAG ATTGGGACAG      3300

GTGACCTTGT CAAAGTTTTC CTAAGTCCAG AAGAGGCTAC AGAAGTTCGC TTTGGTCGTT      3360

TTATTGAGCT AGACCAAACG GACAAAGAAC TGGCTGCCTT TGAAGATGAT AAATTGTTAG      3420

CCATTCTAGA AAAACGGGGC AATCTCTATA AGCCAAGGAA GGTTTTTAGC TAGATCGTTT      3480

AGGAATAAAA ATCGGGTGAT AGATAACAAT TGCTTGATAA AACCCCATAC TAATAGTAGA      3540

ATGGTTTTGG GAATTATAAT ATTCCAATTG TTGCGAGTTG TAGGTACTCA AATAATCTAT      3600

ATAGAAATTT AGAGGTGTGA AATGAAGCAA TTTAAAATTC TTTCAGATAA ATATTTAGAG      3660

TCCATTACAG GTTCTGATGG GAACTTAGGC CCAGGATTTG GTGTGATAAT TCCATGATGC      3720

GAAATGAGTT TCGAGAAAGG GTGGAGCAAC TTCTTCAACA AAAAGAAATA AATGAAAATA      3780

GTGAGTTGAG TCACCTGTTT CGTCTTGCTA TACAAAATTT AGACAGAAAT GAAAAATACC      3840

AATCGGTCAT GGCCAATTTG AGTCAAGGGT TGTCACTTTA CCTCATGACG CATCATTACC      3900

AGGCACCTAA GTCTGTCATT GATTTTGGTT TATGGA                                3936
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(2) INFORMATION FOR SEQ ID NO: 203:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 3230 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 203:

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CATCCAGCAA CTGCTCCTCT GAGCGTTTCA AAATTGATGT AATTTTTCTA GTTTTTTCTA        60

ATAAATGTGC CATTTTTCAC CTCGAATTTA ATCGCTATCA TTATAACATA AAAACGTCTC       120

TTTTTCAATA ATTATCTGAA AATTCCTTAT TGACTTGCAT TGACTTACAA TTTAATTAAA       180

AACCAGAATA TTTTTAATTA AATTGTTCCT TTTCTATTGA CAAGTTGCCT ATTTTTTGTGT      240

ATCATAATAT TATAAAAGAT AATATAATAA TTTTATTTGT CTTTTCACAT TCGGTCTCCT       300

TATATAAAAA AGCGATTCAT TTTGAACCGC TTTTTCTTAT TTATCGCCTT TGTTACGAAT       360

AACAAAGCCT GTTTGCTTTT CGCTTAAAGT ATTGCGTGGT TTTTTATTAT CCTTACGGTA       420

ACGTTTTTCC TTATCAAAAC GATCGTTGCC ACGACTTCCT TTTTTGAACT CATCACGGCG       480
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1185

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ACCATTGCCA CGGCGATCAC GCTCTCGACG GTCGTCCCCA CGACGGCCTC CACGACCTCC      540

CTTAGCTTTA CCACCGAAAC CATTACCTGA TGGTTTAAAC GGTAGTGGtT TTTCACGTGC      600

AATCTCCACT TCTGGAAGGC TATCTGGGTC TTGGACTGTC AGACTCAAGA TATACATTGC      660

CAATTCTTCT GGAGTAAACT CAGCAGCCAA TTTGCGAGCA TCCTTACCAA ATTTCTCAAA      720

GTTGGCACGA ATGGTTTCAT CTGCAAAATC ACGTTCGATT TTCTTGAGAG CTACCTGTTT      780

TTTTGATTGG AAGGATTCTT CTACACTTGC AGGTTTGAGA CCTTTCATGC GTTTCTTAGT      840

CAAGTTTTCA ATGATTTGAA GGTAACCCAT TTCGTTTGGA GCAACAAAAG TAATAGATTG      900

ACCTGACTTA CCAGCACGAC CTGTACGACC GATACGGTGA ACATAACTCT CAGGATCTTG      960

TGGAATATCG TAGTTGTAGA CATGGGTCAC ACCTGAAATA TCCAAACCAC GCGCTGCAAC     1020

GTCTGTCGCA ACCAAAACAT CAAGATTGCC ATTTTTAAAG TCACGAAGGA CACGAAGACG     1080

TTTGTTTTGG TCTAGGTCGC CATGAATTCC TTCTGCACGG AAGCCACGAA TTTTCAAACC     1140

ACGAGTCAAT TCATCCACAC GGCGTTTGGT ACGACCAAAT ACAATAGCGA GTTCTGGTTG     1200

TGCCACATCC ATGAGACGAG TCATGGTGTC AAATTTTTCT TGTTCCTTAA CACGGATATA     1260

GTACTGGTCA ACCAATTCTG TTGTCAATTC CTTAGCCGCA ATCTTGACAT GTTCAGGGGC     1320

TTTCATAAAC TGAACACCGA TACGTTTGAT GGCATCTGGC ATAGTTGCTG AGAAAAGCAA     1380

AGTTTGACGG TTCTCAGGTA CACGGGAAAT AATGGCTTCG ATGTCTTCAA GGAAGCCCAT     1440

GTTAAGCATT TCATCCGCTT CGTCAAGGAT AAGGGTTTCA ATGTCTTGTA ATTTCAAGGC     1500

CTTGCGTTTA ATCAAGTCCA AGAGGCGACC TGGAGTTCCC ACCACAATAT GGGCACCAGA     1560

TTTAAGAGCC TTAATTTGTT TTTCAATGCT TGATCCGCCA TATACTGAAC GGACTTTGAC     1620

TCCCTTACTA CGACCAAAGC GGAAGAGTTC TTCTTGACTT TGGACAGCTA GTTCACGAGT     1680

TGGAGCGATG ACCAAGGCTT GGATAGTCGC TTCTTCTGTA CGGATTTTTT CAAGGGTAGG     1740

CAAGCCAAAG GCTGCAGTTT TTCCTGTACC AGTCTGAGCT TGACCGATAA CATCCTTGCC     1800

TTCAAGGGCC AAAGGAATAG TTTGTTCTTG GATAGGACTA GCTTCTACAA AACCAGCTTT     1860

TTCAATTTCT GCTAGCAAAT CAGCAGACAA GTTTAATTCA TTAAATTTCA CGTTATTCTT     1920

CTTTCTAAAG GTGGTGCGAA GCCACCCTAT AGGGCTTAGT TTATACTTTT CTTTTTATGA     1980

CGTATTTTCA TATAACTAGA TATAAAATCG TGTTGCTTCT TTTCCACAAA AGAAAAGTAC     2040

TGTTTTCTTT GCAACCTATC TAGTATAACA CAAGACCAGA GCAAAAGATA GCCCCATTTC     2100

TACAGAAAAT CATGTAAGCG CTTTTTGACT TTCTTTTTTG ATTGAACGAC CTAGATAATA     2160

AGACAAAGCC AAGGCGATAC TGTATAAAAT GAGAAAAACG AACAAGGTTT GTGTGTACGA     2220
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1186

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ATGAGCCATT TTATAAGTCT CTGCTAATAA AATAGGTCCC GCTAAACCAG CCATTGCCCA     2280

AGCTGTTAAA ATATAACCAT GCAGAGCGGC CAATTCCTTG GTTCCAAAAA TATCACTGAG     2340

ATAAGCTGGA ATCAAAGAAA AACCAGCTCC ATAGCAAGTC ATCAAAATAG ACATAGCAAC     2400

TACAAATAAA ACGGAATCTG TAAAGAGCCA AAGTGAGAGA GAAAAGAAAA GATTGACAAG     2460

CAGTAATATA CTAAAGGTTA GAGGGCGACC GATATAGTCA GACAAACTCG CCCAGAGCAA     2520

GCGACCAAAT CCATTGAAAA TCCCCAAAAC ACCCACCATT ACTGCTGCAT GACTTGTAGA     2580

CAAGCCAGCC ATCTCCTGTG CCATTGGCGA TGCCGCTGAA ATTAAGCCTA AACCACAAGC     2640

TATGTTGATA AAGAAAATAA TCCAAAGCAT ATAAAACCGA TTGCTTTTTA GAGCCTGATT     2700

TGCAGCCATT CCTTGCGTCA AAGAGGCTGT TTTTTCTTTC CCTGAAGAAG ATAAAATTGC     2760

AAGCTCTTGC TCATTTGGAC GCTTAATGAA TTGTGAAGCT AGGAGCATGA TAATAAAGTA     2820

ACTTGCTCCT AAAATATAAA AAGTTTCTAC AAGCCCTACC CCTGCGATGA GGTGTTGCGC     2880

TATGGGACTA GTCAATAAAG AAGCAAAACC AAACCCCATA ATCGCTAAAC CTGTTGCGAG     2940

ACCACGTTTA TCAGGAAACC ATTTTATAAT CGTCGACACA GGGGTAATAT AGCCTGCTCC     3000

CAAACCAAGC CCACCTAAAA TGCCATAAGC GAGATACAAC AACCACAGCT CTGACGGTCT     3060

ATTGCAAATC CTGTTAAGAT ATTTCCACCT GCGTATAGAA AAGCAGATAG ACTTCCCATG     3120

ACTTTCGGAC CAAATTTTTC TACCAAACGC CCCATAAATG CAGCCGATAA GCCCAAACAA     3180

AAGATTGCTA GACTAAAGGC GAAGGCAACA GAAGCCTGAT CCCATCCCGT               3230
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(2) INFORMATION FOR SEQ ID NO: 204:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 5096 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 204:

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CCTATGAAGA CTGTCCCAAC TGGGTGTCCT TCTAGGCTAT CTGGTCCTGC CACTCCAGTC       60

AAACTAATTC CAAAATCAGA CTGGGTCTTG CTTCGTGCCT GCTCAGCCAT CTTCTGAGCT      120

GTAAATTCAG ACACCACACC ATGTTCTTCC AAATTCTTGG CAGGAATATC CAACATCCTT      180

GATTTTTCCT CCAAGCTATA GGTCACAAAA CCACCCTTAA ATATACTTGA AACTCCAGAA      240

AAATTCGCCA CGGTAGCTTG GAAAAGACCT GCCGTCAAAC TCTCTGCAGC CGCGATGGTT      300

TTCCCTTGCC TTTTCAGTTC TTCTACCACA ATGCTGGCTA AACTAGTTTC TTCCCCATAA      360

CCATAGCAAA AGTCTCGTAA AGAAATTCCT TCGAAAGTCT GGCAGTCCAA GATTTGATTT      420
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1187

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TCCAAGATAT CCAGCGCTTG ATTCGCCTCT TCTTGACTGC TAGCCTTTGT TGACAGACGT    480

AGAGTGACTT CTCCTGTCTT GGCATAAGGG GCCAAGGTAG GATCGATCTG ATTATCAATT    540

AAATCAGCCA AAATCGTAAC CAACTGGCTC TCGCCAATCC CAAAGAAACG AAGAACTCGG    600

GAATACAGCT TGCTCCCTGT CATCAACTTG GGTAGAAGTT GGTTTAAGAC CATGGGTTTC    660

AATTCACTTG GCGGACCTGG AAGGACGACA TAGGTCACTC CGTCTACTTC TAATTTTCCT    720

CCAACAGCCA GTCCTGTTTC GTTTGGCAGT GGAATCGCTC CTTCTACAAT TTGAGCTTGT    780

CTTTCGTTAT TCGGTGTTCG GGCATAGTCT GGTCGCAGGG TAAAAAAGAT ATCCAACTTC    840

TCCTGAGCCT GAGGATCAAA GACTAATGCT TTCCCTAAAA ATTTAGCTAG GGTTTGTTTG    900

GTTAGGTCGT CCTCAGTTGG CCCCAAACCG CCTGTCAAAA TCACCAGACT GCTACGTTGA    960

CTGGCAATCT CAAGCAAAGA CAAGAGACGA ACTTCATTGT CTCCTACAGC CGTCTGAAAA   1020

TATACATCTA CCCCAATCTC AGCTAGTTTT TCCGACAAAA ACTGGGCATT GGTGTTGACA   1080

ATCTGCCCTG TCAAAATCTC TGTTCCAACA GCAATGATTT CTGCTTTCAT GTTTCCTCCT   1140

ACCTATCTAT TCGTATTTTT TTGAAAAAAT CGCAGGAATT TTCCTACGAT TGATTTTTTT   1200

ATTTGTATCA AAAGTTAATT ATCTTCATCA CCAACAGGTG CTCTGCCAAA TAAATCTTCA   1260

AATAAAACCG CATTGGTTTC AAGCTGAGTA ACTTCTTCTT GTCCCAAAGA ACGTCGGAGT   1320

AGATTTTGCA TTTCCAACAT ATGTGCTCTC GAAACAATCT GGTAAGAAAC ACCTTGAAGT   1380

ATCTCTCCTT CACCCTGCAA CTGCTGAGTT TCAATGGTTT TAAATGAATC TTTATAGCCT   1440

AGCAAGTTAG GGATACTTTT TGCAGACAAA TCAATATTGG TCTGCATATT GTCACTCAAA   1500

GCTTTTAGAA TCTCTTGATA ATGACCAATG CTATTTAAAC TGAGAGCTTT TTCCATGACT   1560

TTTTGAATAA CTTCACGTTG ACGTTTTTGA CGACCATAAT CCCCCTCAGG ATCTTGGTAA   1620

CGCATTCGTG CATAGACTAG GGCTTCTTCT CCCCCAATAT GTTGCTCCCC AACACCGATA   1680

GAAATAGTAT TAAATTCTTC TTGGTCACTG ATAGAAATTG GGAAACCTAG GATATTATTG   1740

ACTGTAATAC CTCCTACTGC ATCCACTAGT TTTTGCAATC CTCTCATATT GACCATCACA   1800

TAGCGATCAA TATGGATATT CATCATTTTT TGAATGGTTT CTATAGCAAG CTCTGCTCCA   1860

CCATCTGCAT ATGCTGAGTT CAGTTTCGCT TCATGAGCCT GACCATTCCC TGATTCAATG   1920

CGCGTCAGAA TATCCCGCTC TAAACTCATC ATTGTTGTTT TTTTCGTTTT AGGATTCACT   1980

GTCATCAAGA TCATGCTATC ACTTCTACCG ACCCAAGTTT CAGTTCGTTC AACATTTCCG   2040

GTGTCCACTC CCATTAACAG AATGGTTAGA GGTTCAGTCG CTTCAATAAC CTTGGTTTCT   2100

TCACCGATTT TTTTATAGGT TTTAGCTAAG GTTTCTGTCC CTTGTTGATA AATAGTATAA   2160
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1188

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GCAAAAACAC CTACTCCTAC TACAGTTACA GAAAGTAAAG CTAGCACCAT TCCAATAATT    2220

TTTTTAACCA TATTTCTACT AACCTATCAG TTTACCCATC AAGTAAACAT CGATAAATTT    2280

CCCTTCTTCT ATATATGCCC CACGCTCTTG GCTACCTTCA ATGACAAAGC CATGCTTTTG    2340

ATAAAGATGG ACTGCTGCTT GATTACGAGT TTGGACAGTC AGTTGGAGAC GACGCAGAAT    2400

GCCACTTGCT TGTGCCCACT CTATCGCTTC TTCTAGCAAC AAACTTCCCA AGCCATTATT    2460

CCAATATCTT TTTCCAATCA CAATGAAGAG ATCTCCAATA TGACGGACTC TCTTACGCTG    2520

ATCAGCTGTA ATATTTACAA TACCAGCAAT TTTGCCATTT AAGAATGCAA GTAAGGTTAT    2580

CTGATTGTCC GAACTAGCTT GCTTGTTGAG GAATATTTCC ATCTCCTCAC TAGTCAAGAG    2640

AATACCATCT CCGTCTAGGC TGGTAAAGTC TGTCTCCAAA CTCACACGAT TTAAAAAGGC    2700

CACTAATTCA GCTGCATCTT TGGGCTCTGC TTCCCTAATG AGCAATTCAT ACTCCATATT    2760

GAAGCTCCTC TAACAATTTC TCAGCACGCA AACCCTTTGC CTGAAAATTT AAACGGCGTC    2820

CATCTGCTTC TTTTAGAATT TCCAATTCTA AATAAGCATC TGGCAAGGCA TCTCCTAAGA    2880

GATTTCCCCA CTCAATAACA GTCACGCCGC CACCAAAGAT AAACTCATCC AAGTCGATAG    2940

AATCAGCATC TCCTTCAATA CGATAAACAT CTAGGTGATA AAGTGGAAGT CGACCTTCAT    3000

ACTCTCTCAC GATAGTATAG GTGGGACTTT TAATCATTTG AGAAATCTGT AATCCTTTTG    3060

CAAGTCCTTT AGTAAAGGTC GTTTTACCTG CACCCAGTTC TCCAGTTAAG ATTAAAACAT    3120

CATTCTTTGC TAATAGATGG CCCAAACGCT CCCCTAAGGC TTGCAACTCT TCTTCATTTT    3180

TTGTGTACAT ACTCTTATTA TACCAAAAAC TTTTCTTTTG TGTCTATTTT CCTACTAAAC    3240

TTATCATCAT AACATCCATA AAAAACAGGC TTTCTCTAAA AGAAAATGAG CGTAACAATG    3300

ACCAATACAA GATCTCGGAA AATATGACCA TAAAAGGAAA CTTCCTTCTT AACCGAATTT    3360

GGGACAAGAT AGGCTGCAAA AAACAAGCCC AGTCCAATAT AAATCAGAAG TGAGACAATG    3420

GTCATTGGAT TTCTTAAGAA AAGAAGTGTT GCTAAAATAG TCACCAACAC TGTCTTTTTT    3480

CTGTCCAGCA TAGCAAGAAA ATCGCGCACG TATTTTTTCA AGGGTAAAAA AATCAGCAAA    3540

TCTAGCCCAA ATAGGAAAAA GAAGGATGGC AATAAAAAGT CAACTAATTC TTGCTGCAGC    3600

GTATTTTTGA TGAACAAGTT ATCTGACAAA ACAAGAACAG CTCCTAACAA ATTAATTAAG    3660

AGTAACATAC TGTAAAAAAG CTTCACCGAC TTCTTACTGG CTAGGACACT ATGGACTTCT    3720

TGCTTACGGG TATAAAGATA ATTTACTCCA GCACAGATTC CTGAAACGAA AACCATGCTT    3780

CCGATGAAAA AAGCTGTACT TTGTTTAAAG GACAAGATGC ATTCCTTCCA TAGGAAACAG    3840

CTACTCAAAC TGATTTGAAT TAAAGCTAAC AAAAATAAGA TTCTCATTGA TTTCATCTTC    3900

TCTCTCCCTT CCTACCAATC ATTATACTAG GAGAAAAGAG AGAACTGTTT CTAATCTTCT    3960
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1189

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CAAATGTCTC TTTAAGACGC TAAACAAACA CTAGAGACTA ATACTCAATG AAAATCAAAG       4020

ATCAAACTAG GTAGCTAGCC ACAGGTTGCT CAAAACAGTG TTTTGAGATT GCAGATAGAG       4080

CTGACGTGAT TTGAAGAGAT TTTCGAAGAA TATAAATTTG AAATCATGAA AATCCGTCAA       4140

ACGGGTGGTT GTTTTGTCTC GCACCTCACG GAGCGAGACG GACTCAGAGT CACATAATTA       4200

TAAGGCTGAT AGTATTAATC TAACTATCAG CtTmCAGGTT ATTTAACGTT TCAGAAAAAC       4260

TATAATGTCA AGATTAACTA AACAGTATCT AGTTCCTTCA AATAATTTTC TATCTTCATC       4320

AACATTAAAG GATTGTTATA AATCTTACAT AACTCTCTTG CTTCTATATA ATAATTTTTG       4380

ACTTGTTCTC TGTCTAGAAA TTTGGCTCCA GCATTTCCTA CAAGAATAAG TAGAGGAGCC       4440

AATTGGTAGC TTGTCTGTCT TTGTTTACAG AGTTCAATCG TTTCAAGAGC TTCTTGGATG       4500

GCTTCATTAT ATTTTTCCTT TGATACTAGG TAGTGAGCGT AGTTGTAACG AACTCTGATG       4560

TAGCCAAATA AAAACTCTTG ATGGTCCAAA TTTTTTGTCT GATACAACTC TATTAAATGA       4620

GAGTAGTTTG CCTCATATTC TTGTTCACGA CCCACTAAGG AATAGAAATT AGATAGAGTA       4680

TTCAACGCCT TTAAATAAAT CAGAGTATTT GAAGAGACTT TTAATAATAT ATTTTCCAAT       4740

GACGAAATTG CCTCACACTT ACTGTCATAT TGATAGAAGT CAATTATAGA TTTAATCCAT       4800

TCAAGGTAAG TTCGGTCTTC TAATGTTAGA AAAGTGCTTC GTTCTACTTC TATTTTATAA       4860

AGATATTCTA AATCGTCATA ATTTCTGTCA TCTAATAGGC GAGCAGATAG ATGTTTGAAA       4920

TTAGAGAGGT TAGACTTAAC TTCGATTTGT TCATTGAAAA AGTAATCCAA AGGGACTTCA       4980

AGTCGTTGAG AGAGTTTGAA TAACAAGTCT GCGGAGGGAA TAAAATGACC TCTTTCAATT       5040

TTACTAATCT GGCTTTGTTC ACAAATTCCT TCTGCAAGAG TTTGTTGGGA GAGTCT          5096
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(2) INFORMATION FOR SEQ ID NO: 205:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 2395 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 205:

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ACAAGATAAA AATAAAGGAT TACAATGGGG AATATAAAGT AAACCGGTAA ACCTAAAAAG        60

AAAGGAGAAA AGATGAAAAT TGTACTTGTA GGGCATGGAC ATTTTGCTAC AGGGATTTAT       120

AGTTCTTTAC AATTGATTGC AGGTAATCAA GAAAATGTGG AGGCGATTGA CTTTGTGGAA       180

GGAATGTCAG CAGATGAACT CAAGCAAAAA ATCTTACTTG CAATTTCAAA TGAAGAAGAA       240
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                                   1190
GTTTTAATCC TAAGTGATCT CTTGGGAGGA TCGCCATTCA AGGTTTCTTC TACCATAATG        300

GGAGAAAATC CAGCCAAGAC AATGAATGTT CTCTCGGGTT TGAACTTAGC CATGTTAATG        360

GAAGCAGTCT TTGCTAGAAT GGCTCATAGC TTTGATGAGG TTGTTAATAA ATCAGTAGTG        420

GCGGCCCAGG GCGGAGTCGT AAATGGTAAA GAATTGTTTT CAACGGATGC AGAGGAAGAG        480

GAAGAAGATT TCGAATCGGG TATTTAAAGG GTAAAAGAAT GATAAAAAAG GTTACGATTG        540

AAAAAATAAA ATCGCCTGAG CGCTTCTTAG AAGTACCACT TCTGACGAAA GAAGAAGTCG        600

GCCAGGCAAT CGATAAGGTT ATTCGGCAGT TAGAACTCAA CCTTGACTAT TTCAAGGAAG        660

ATTTCCCGAC GCCAGCTACC TTTGATAATG TCTATCCAAT CATGGATAAC ACGGAATGGA        720

CCAATGGTTT CTGGACAGGA GAACTGTGGT TGGCTTATGA ATACAGTCAA CAGGATGCAT        780

TTAAAAACAT CGCTCATAAA AATGTTCTTT CTTTCCTGGA TCGTGTCAAT AAGAGAGTAG        840

AATTGGATCA CCATGATCTC GGCTTCTTGT ACACACCGTC TTGTATGGCT GAATATAAGA        900

TAAATGGAGA TGGAGAGGCT AGAGAAGCAA CCTTGAAAGC TGCAGATAAG TTGATTGAAC        960

GCTATCAAGA AAAAGGTGGT TTTATTCAAG CTTGGGGAGA CTTGGGCAAG AAAGAGCATT       1020

ACCGTTTGAT TATCGACTGC TTGCTCAATA TCCAACTCTT ATTCTTTGCT TATCAAGAAA       1080

CAGGCGATCA AAAATACTAC GATATTGCAG AAAGCCATTT CTATGCTTCA GCTAATAATG       1140

TAATCCGTGA TGACGCTTCG TCCTTCCACA CCTTCTATTT TGATCCTGAG ACAGGTCAAC       1200

CCTTTAAAGG TGTAACGAGA CAAGGGTATA GTGATGATTC ATGCTGGGCA CGTGGTCAAT       1260

cATGGGGAGT CTATGGTATT CCTTTGACTT ATCGTCACTT AAAAGACGAG tCCTGCTTTG       1320

ACTTGTTTAA GGGTGTGACC AATTATTTCT TGAATCGTCT GCCAAAAGAT CATGTGTCCT       1380

ATTGGGATTT GATTTTTAAT GATGGTAGTG ATCAATCACG AGATTCTTCA GCAACAGCTA       1440

TCGCCGTCTG TGGGATTCAT GAAATGCTAA AACATCTCCC AGAGGTGGAT GCTGACAAAG       1500

ATATTTATAA ACATGCTATG CATGCCATGC TTCGTTCCTT GATCGAACAT TATGCAAATG       1560

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AAGGAGTGGA TGAAGGCAAT ATCTGGGGTG ACTACTATTA CCTAGAAGCC CTTATCCGTT       1680

TCTACAAAGA CTGGAACCTA TATTGGTAGG AGGAGAAATA TGACAATGCC AAATATTATT       1740

ATGACCCGTA TCGATGAACG GTTGATTCAT GGACAAGGAC AACTTTGGGT AAAATACCTA       1800

GGTTGTAATA CGGTCATTGT TGCCAATGAC GAAGTAAGCA CGGACAAGAT GCAACAAACT       1860

CTGATGAAAA CAGTTGTGCC AGACTCAGTT GCCATGCGTT TCTTCCCTTT GCAAAAGGTG       1920

ATTGATATCA TTCACAAGGC TAATCCTGCT CAAACGATCT TTATCGTTGT AAAGGATGTG       1980

AAGGACGCTT TAACCTTGGT AGAAGGTGGT GTCACTATCA AAGAAATCAA TATTGGGAAC       2040
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1191

ATTCACAATG CCCCTGGTAA AGAGCAAGTG ACACGCTCCA TCTTCCTGGG TGAAGAGGAC   2100

AAGGCGGCCC TCAAGGAATT GAGCCAAACT CATCAAGTAA CATTTAATAC GAAAACAACT   2160

CCAACAGGAA ATGATGGAGC TGTTCAAGTC AACATTATGG ACTATATTTA ACAGAGGAGA   2220

TCGTTATGTC GATTAATGTA TTTCAAGCGA TTTTAATTGG ATTATGGACA GCTTTCTGTT   2280

TTAGTGGAAT GCTGTTAGGA ATTTACACCA ATAGATGTAT TGTTCTGTCA TTTGGTGTCG   2340

GAATTATTCT AGGTGATCTG TCATGCTCTT GCAATGGGAG CCAATGGTGA ATTGG   2395

(2) INFORMATION FOR SEQ ID NO: 206:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 3342 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 206:

CCTTCTTTAG AGGTTAATTT TGCAAAATCG TCGATTGTTA TATAAGGATT ATTATAGAGA   60

CTGTTCGCAA AGAATCTCTG ATATGTTTTT GAATCTTTTG AATACAAAAC TATCTCTCTA   120

ATAGCATTGC CATCTGTTCC ATCAATTGGT AAACATACCG TAACTAGAAA AAGAATTATA   180

TTCAAAATAA AAAATTCTGA TGCGTACGGC ACAAATCCCA AAAGTGCTAA TATTGCGACA   240

ATTAGGTTAG CTCCACCTCC CCCAAAGAAG TAGAACACCA AATTCCTATC ACTATTTTTT   300

TCATTAGTAA TGTTTCTATT ACTCATTTGA CAATAACCGA ATGCTAATAA CACTGGAAAT   360

TTGAAATATA TTTTTTTTCT GAAATAGAAG AAAAAGGGAG TAGCAAGCAT CTCTAGTTTA   420

TAAGATAAAC ATCTTCCCAC TAAAAAATGA CCTAGTTCAT GTAATGTAAT TGATATTAAC   480

GAAATTAAAA TCAATCGAAA ATAATAGATT AATGAATCAT TTGGAAAAAT TATCAATAAT   540

AGGAACAATA ACGGAATCAA ACATAAATAT ATGACAGAGT TATTTAATAT TTTCAACATA   600

ATACCATTCC TCTAAACTAT TAGCTTCAAA AAGGCGTTTT TTCTCCCAAT ACATCTTCTC ·   660

AAAATGTTCG GAATCATAAT TTTCTAAAAT TAATTTTAtG TCTGGTAAGC TCTTTCTTGA   720

TAATCCGTTG TTTTGTACTT AATTTTCCCT TCAAGTACAT CTTCAATTTT ATAAGTTGCC   780

TCCATCAACT GAGCCTCTGC AATATCTTTG AGTGAATTGG TAATTGAAAC TTGGTGTAAT   840

ATCTGTCCts CCATATATGA AAATATATCT CTAAGATATT CTGACACATT ATCAGAGCCG   900

TTACTCTCAG CAACATCTAA TGTTACAACA AACTTTCCAG CTAATCGAAA AAGATGGCTC   960

CACCCCCCAA TCCTTTCAAT AAAGTTTTTT GTGTCCACAG ATACGTTTTG TAAATATACA   1020

1192

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GGAGAAGAGA TAATTATAAT ATCAGACTCT AATAACTCTT TTTTTATAAC ACCTCCATCA      1080

TCAGCATTAC TTTGCCTATC AATTCCTTTC TTAAACAACT CTTCTGAATC AGAATTAGAT      1140

ATTTCTAGCT CTGAATTGAA AGGTGTCCTG AAAGATATAT CAACATTATT TCTACTAGAA      1200

ATGATACTTG AAAGTCTCTT AGTATACTCT AAAGTCTTAG AGTTATGATT TCGCACTCCT      1260

GCATATATAA ATATTTTATT CATTTTAATT CATCCTCTCA ATTTGAATTT AGTAGATTTT      ·1320

TCAAGATAGT ATGGTACAAA AACAGACTTT TGTTGACTCA CATTATTACA TATGTTTTGT      1380

ATTAAACCAA AATCAATACT ATTTTTGGAG TAATTTTGAT TTTAGTTTAA AATCATTTCT      1440

ATAACAGTAG CATATACCTC AAGCCGTTTA GCAATTAGAA TAGAACTTTT CTTTATTATA      1500

TTATTATCTC AACGAAAAGC TACACTATTA AAAATATTTT ATAGAATTAC ATATTAAACT      1560

AGTCAATCTT GGTATTTTTA TATTGCTTAA TGAGTGGACA CCTCTATTTT AGAAACAAAA      1620

CTATAAATTA AGCTAGATTT CAAGTAATGA GGGGATAACT ATCTTTTTGT CATTCTGATT      1680

CAGTGCGATA TACCTTAAAA AAGTATAAGC AATACCAGTC ACACCTGTAT ACAAAGAAAA      1740

ATCTGGGAAA TTGCTTGTTT GGACGATACG ATACTCTCCT TCTTTTGATT TATTCATTAC      1800

AACACTACAC AATAAAGACT CCAATTCCAT ACTAGTATCC ATTTCTTTCA TGTAGTCGAT      1860

GTAAAAATTT ATTATGGCCA TACTTCCATG GCAAAATGTA TCATTATCTA AACTAGCTAC      1920

AATTCCCTCT GGAACACTTT GGGGATGATT AACTAATGTC CCAAATTCTC CACTACACCA      1980

CTTCAAAGAA TGAATTTTGA TTTTCTCCCT AGGAACTAGT TGTAAAATTA ATTCTTTATA      2040

TTTTTTAAGT CTTGTCACTT TATAAATATT TTTTAATGTA AAAATTACAC CTGATAGTCC      2100

ATGGCCAAAA CTATATCCAA AATTACTATT ATCTCTCTCG CTTACATCAT TATATAGCGT      2160

ATCACCTAAA CTTAATACTA GCCTTAGAAC ACGTTCCTTC TCTATTCCTC TCCTATAATA      2220

TCTTACCAGT GTATTAATTA AAGGTAGAAG ACCATTAATA TAGTCAGACT TGTTTGAAAC      2280

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GAGAGTATTT GTATCGTAAT CCTCTATAAT GGATAGAACA ATGAAATATC CTATATCCCC      2400

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ATTGTACAGT TGAGTATATG ATGATTTATC TTTCAATAAT TTTACATAGT ACATAAACAG      2520

TAATATTCCA GCTCTACCCC TATACATATC ATTmCCCGTT TGTTCAAGAC ACCATTTAGA      2580

ACCTTTAAAA TTAACAGGTA TACTCCAAAT TGGATATTCG TCATAAATAT TATTAATAAC      2640

CAAAGAGTCT GCAATATTTT CTACTTCATT ATGCAGAATA GTAACTAAAC TTTCATTTGG      2700

GAGTTTTTTT CTATTAGATA AGTTTAATTT ATATCCTTTT TTTCGCTGAT CAAAGCTTGG      2760

AAAATAAATT TCAATGATAT CAAGTTGCTT TTCTAAATTT TCCAAATTAT TATTAGGTAA      2820
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1193

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ATATTTCATA AAATAGTCAT ATCCAGAAAA TTGATGTAGG GAAATAAAAT GATTTCCAAA    2880

ATCATCGTAG ATTTCATTGA TATTTGTATC TGTATAAAAA ATCGGAATAT CTAATAACCT    2940

CATTTGTTCA CATTCGCTTG CTACAATACC TTGATTAGAA AACTTATTGC TCCAGAGATT    3000

TTCCAATGCT TTTTCTCTAT CTAACATTTC TTCATAAAAA TCAGGATGAT ATAAAAAAGA    3060

TAGTACTGAA GCATAGCTAT TTGTGTCTCT AAAAAGTACC CTTGTCTTTA AACCATACAA    3120

GTTTGCTTTT AATAGCATTT TAAATTCTTC TGTTTTATTT AACTCTTCAA ATATCAGATA    3180

AAAATCCCTA AAACCTTTTT TGAAATCTTT TATATACTTA TCAAATTCTA TATCACCATC    3240

CCGAACAGGC AGGTTTTTCC CACCTTCAAA ATCAATTTTC CCAATATCAA ACTTTACCTT    3300

ATCAGTATTT AAATTAATTA AAACTTGACC AGGGATCCTC TA                       3342
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(2) INFORMATION FOR SEQ ID NO: 207:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 3454 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 207:

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GAGAAAAGAA TGTTAAAGAA AAATGATATT GTAGAAGTTG AAATTGTTGA TTTGACCCAT      60

GAAGGGGCAG GAGTTGCCAA GGTAGATGGT TTGGTCTTTT TTGTAGAGAA TGCTTTACCG     120

AGTGAAAAAA TTCTCATGCG TGTCCTCAAG GTCAATAAAA AGATTGGCTT TGGAAAAGTT     180

GAAAAATACC TTGTCCAGTC ACCACACCGT AATCAAGATC TAGATTTGGC TTACCTGCGT     240

TCAGGAATCG CGGATTTAGG ACACCTTTCT TATCCAGAAC AGCTCAAGTT TAAAACCAAG     300

CAAGTCAAGG ACAGTCTCTA CAAGATTGCT GGAATTGCAG ATGTAGAAGT TGCTGAAACG     360

CTTGGTATGG AACATCCAGT CAAGTATCGC AATAAGGCGC AGGTGCCCGT TCGTCGAGTG     420

AATGGTGTCT TGGAAACAGG ATTTTTCCGT AAGAATTCGC ATAACCTCAT GCCCCCTTGAA     480

GATTTCTTTA TCCAGGATCC TGTCATTGAC CAAGTCGTAG TAGCTCTTCG AGACCTGCTC     540

CGTCGTTTTG ATTTAAAACC TTATGACGAA AAGGAACAGT CTGGATTGAT TCGGAATCTT     600

GTGGTGCGTC GTGGTCACTA TTCAGGACAA ATCATGGTCG TTTTGGTGAC AACTCGTCCA     660

AAAGTTTTTC GTGTTGACCA ATTGATTGAA CAAGTTATCA AGCAGTTCCC AGAGATTGTG     720

TCTGTCATGC AAAATATCAA CGACCAGAAT ACCAATGCGA TTTTTGGTAA GGAGTGGCGC     780

ACTCTTTATG GTCAAGACTA TATTACGGAC CAGATGTTGG GAAATGACTT CCAAATCGCT     840
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1194

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GGCCCAGCCT TTTACCAAGT CAATACTGAA ATGGCGGAGA AACTCTATCA AACAGCCATT        900

GACTTTGCAG AGTTAAAAAA AGATGATGTG ATTATTGATG CCTATTCTGG TATTGGAACC        960

ATTGGTTTAT CAGTCGCCAA GCATGTCAAA GAAGTCTACG GTGTTGAACT GATTCCAGAA       1020

GCAGTAGAGA ATAGCCAGAA GAATGCTTCT TTGAACAAGA TTACTAATGC CCACTATGTC       1080

TGTGACACGG CTGAAAATGC CATGAAGAAA TGGCTCAAGG AAGGTATTCA ACCAACCGTT       1140

ATCTTGGTTG ATCCTCCACG CAAGGGCTTG ACAGAAAGCT TTATCAAAGC AAGCGCCCAA       1200

ACAGGAGCCG ATCGCATCGC CTATATCTCC TGCAATGTCG CAACCATGGC GCGTGATATT       1260

AAACTATACC AAGAGTTGGG ATATGAATTG AAGAAAGTCC AGCCGGTGGA TCTATTTCCT       1320

CAAACGCATC ACGTCGAGAC GGTAGCACTT TTGTCCAAAC TCGATGTCGA TAAGCACATA       1380

AGTGTTGAAA TTGAGCTGGA TGAGATGGAT TTGACAAGTG CGGAGAGCAA AGCAACATAT       1440

GCTCAAATCA AAGAATATGT TTGGAATAAA TTTGAATTAA AAGTTTCGAC ATTATATATT       1500

GCACAGATAA AAAAGAAATG TGGAATAGAA TTACGAGAAC ATTACAACAA GTCTAAAAAG       1560

GATAAACAAA TTATTCCACA GTGTACACCT GAAAAAGAAG AAGCCATCAT GGATGCTTTG       1620

AGACACTTCA AAATGATTTA ATAGAAAAGA ATGACAGTAT ATGACTTTCT GCATTTATTA       1680

CATTCCTACT TGGTATAGGA ACAGCTATTA TTCCTTTCTT GCAAGGTATC AATTAGAAAA       1740

TAGGCTCAAT ATAAAGATTG ATAGGATCAT TTTTATATTT AAAGGAGCGT TGAAATGATT       1800

GATAAAGGCA ACAAAAAATT TTAGGATAAA TTTGCTAAGT TGTATGCCTC TTTTATGAAA       1860

AAAGATAAAG AGGTTTATGA TAAAGTTTGT GAATATCTTA GTCCTCATTT GAATAAAGAT       1920

ATGGAGGTGC TTGAACTTGC TTGTTGGTTT CGTGTCATAA CAGTTATAGA GGCAAATAGT       1980

TATGTAAATA TAAGGAGTTC AAGACTTCTA CCAAAGTTTA AAACTCAAAA AATAAATAGT       2040

TGGTGTGCTG CTTACAATAT CCATTTTAAT AATGGATATT GTAAGCAGCA CCCCcAtGAA       2100

TTTAAAGATT CTTTAAAGAG TCTTATTTTG TGATGAAAAT TTAATATGTA AATCTCAGAC       2160

GATAGAAATT AAAAACTCTA TCGTCTTTTT TATACTCAAA ATTAGGAGGT AAAAATGGTA       2220

AGGATAAGAG GTCCCACTTA AAACAATTTA TGGCAAAATA AGGACGGAAT AACACAACAA       2280

ATTCTCTAAA ACAAATCACT AAATCAATGT AAGATTGAAT GAAATCAATA TTTATGCTAT       2340

AATTAAATAA ATTTAATGAA GAAAAAAAGA GGGATATTAT GGCACTTAAC TATAAACCAT       2400

TATGGATACA GTTAGCAAAA AAAGGACTAA AGAAAACAGA TGTAATAGCT ATGGCAGGAC       2460

TTACAACAAA TGTTATGGCA CAAATGGGAA AGGATAAACC AATTACATTT AAGAATTTAG       2520

AAAGAATATG TAAGGCTTTA TCTTGCACTC CTAATGATAT TATTAGTTTT GAAGATAATT       2580

TTAGTGACGA GGAATAGAAA ATGACTTTAA GGACAGAAGA TCAAGTTAGG GATTATGCAA       2640
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1195

GAGAAGTATA GGCTTTAATG AAGTTGAAGA AAACATCAAT CAAGGTACTG GTCAAATAAC   2700

TACTTTTAAT CAATTAGGCT TCAAGGGATA TTCAAATAAG CCAGATGGTT GGTATTTACC   2760

TAAAAATATG AATGATGTAG CAATAATCCT TGAAACAAAA TCAGAAGAAA GAGATATTAG   2820

CAAACAAATT TTTATTGATG AGTTAATGAA AAATATAGAC ATAATTTAAC TAAAAATAAA   2880

AACTAGATCC TTTTTTGAAA AAATTATATT ATTAAATTTG TAACTGTATC TATTGACAAT   2940

GATAATTATT ATCGATACAA TAGACTTGAA ATATGTTTAA GGAGTTTTTA TGAAAaCAAA   3000

TTTTTTCTAA TmGCTATTTT AGCTATGTGT ATAGTTTTTA GCGCTTGTTC TTCTAATTCT   3060

GTTAAAAATG AAGAAAATAC TTCTAAAGAG CATGCGCCTG ATAAAATAGT TTTAGATCAT   3120

GCTTTCGGTC AAACTATATT AGATAAAAAA CCTGAAAGAG TTGCAACTAT TGCTTGGGGA   3180

AATCATGATG TAGCATTAGC TTTAGGAATA GTTCCTGTTG GATTTTCAAA AGCAAATTAC   3240

GGTGTAAGTG CTGATAAAGG AGTTTTACCA TGGACAGAAG AAAAAATCAA AGAACTAAAT   3300

GGTAAAGCTA ACCTATTTGA CGATTTGGAT GGACTTAACT TTGAAGCAAT ATCAAATTCT   3360

AAACCAGATG TTATCTTAGC AGGTTATTCT GGTATAACTA AAGAAGATTA TGACACTCTA   3420

TCAAAAATTG CTCCTGTAGC AGCATACAAA TCTG   3454

(2) INFORMATION FOR SEQ ID NO: 208:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3752 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 208:

CGGGAGTATA CTTAATATAA TTATAGTCTA AAAATGACTA TCAGAAAAGA GGTAAATTTA   60

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TTTTGTTACG TCTCAGCCTA CTTTTGTAAG AGCAGAAGAA TCTCCACAAG TTGTCGAAAA   180

ATCTTCATTA GAGAAGAAAT ATGAGGAAGC AAAAGCAAAA GCTGATACTG CCAAGAAAGA   240

TTACGAAACG GCTAAAAAGA AAGCAGAAGA CGCTCAGAAA AAGTATGAAG ATGATCAGAA   300

GAGAACTGAG GAGAAAGCTC GAAAGAAGC AGAAGCATCT CAAAAATTGA ATGATGTGGC   360

GCTTGTTGTT CAAAATGCAT ATAAAGAGTA CCGAGAAGTT CAAAATCAAC GTAGTAAATA   420

TAAATCTGAC GCTGAATATC AGAAAAAATT AACAGAGGTC GACTCTAAAA TAGAGAAGGC   480

TAGGAAAGAG CAACAGGACT TGCAAAATAA ATTTAATGAA GTAAGAGCAG TTGTAGTTCC   540

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                                    1196
TGAACCAAAT GCGTTGGCTG AGACTAAGAA AAAAGCAGAA GAAGCTAAAG CAGAAGAAAA        600

AGTAGCTAAG AGAAAATATG ATTATGCAAC TCTAAAGGTA GCACTAGCGA AGAAAGAAGT        660

AGAGGCTAAG GAACTTGAAA TTGAAAAAACT TCAATATGAA ATTTCTACTT TGGAACAAGA       720

AGTTGCTACT GCTCAACATC AAGTAGATAA TTTGAAAAAA CTTCTTGCTG GTGCGGATCC        780

TGATGATGGC ACAGAAGTTA TAGAAGCTAA ATTAAAAAAA GGAGAAGCTG AGCTAAACGC        840

TAAACAAGCT GAGTTAGCAA AAAAACAAAC AGAACTTGAA AAACTTCTTG ACAGCCTTGA        900

TCCTGAAGGT AAGACTCAGG ATGAATTAGA TAAAGAAGCA GAAGAAGCTG AGTTGGATAA        960

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AATATTACTT GGAGGGGCTG ATCCTGAAGA TGATACTGCT GCTCTTCAAA ATAAAATTAGC      1080

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TGATCCTGAA GGTAAGACTC AGGATGAATT AGATAAAGAA GCAGAAGAAG CTGAGTTGGA       1200

TAAAAAAGCT GATGAACTTC AAAATAAAGT TGCTGATTTA GAAAAAGAAA TTAGTAACCT       1260

TGAAATATTA CTTGGAGGGG CTGATTCTGA AGATGATACT GCTGCTCTTC AAAATAAATT       1320

AGCTACTAAA AAAGCTGAAT TGGAAAAAAC TCAAAAAGAA TTAGATGCAG CTCTTAATGA       1380

GTTAGGCCCT GATGGAGATG AAGAAGAAAC TCCAGCGCCG GCTCCTCAAC CAGAGCAACC       1440

AGCTCCTGCA CCAAAACCAG AGCAACCAGC TCCAGCTCCA AAACCAGAGC AACCAGCTCC       1500

TGCACCAAAA CCAGAGCAAC CAGCTCCAGC TCCAAAACCA GAGCAACCAG CTCCAGCTCC       1560

AAAACCAGAG CAACCAGCTA AGCCGGAGAA ACCAGCTGAA GAGCCTACTC AACCAGAAAA      1620

ACCAGCCACT CCAAAAACAG GCTGGAAACA AGAAAACGGT ATGTGGTATT TCTACAATAC      1680

TGATGGTTCA ATGGCAATAG GTTGGCTCCA AAACAACGGT TCATGGTACT ACCTAAACGC      1740

TAACGGCGCT ATGGCAACAG GTTGGGTGAA AGATGGAGAT ACCTGGTACT ATCTTGAAGC      1800

ATCAGGTGCT ATGAAAGCAA GCCAATGGTT CAAAGTATCA GATAAATGGT ACTATGTCAA      1860

CAGCAATGGC GCTATGGCGA CAGGCTGGCT CCAATACAAT GGCTCATGGT ACTACCTCAA      1920

CGCTAATGGT GATATGGCGA CAGGATGGCT CCAATACAAC GGTTCATGGT ATTACCTCAA      1980

CGCTAATGGT GATATGGCGA CAGGATGGGC TAAAGTCAAC GGTTCATGGT ACTACCTAAA      2040

CGCTAACGGT GCTATGGCTA CAGGTTGGGC TAAAGTCAAC GGTTCATGGT ACTACCTAAA      2100

CGCTAACGGT TCAATGGCAA CAGGTTGGGT GAAAGATGGA GATACCTGGT ACTATCTTGA      2160

AGCATCAGGT GCTATGAAAG CAAGCCAATG GTTCAAAGTA TCAGATAAAT GGTACTATGT      2220

CAATGGCTTA GGTGCCCTTG CAGTCAACAC AACTGTAGAT GGCTATAAAG TCAATGCCAA      2280

TGGTGAATGG GTTTAAGCCG ATTAAATTAA ATCATGTTAA GAACATTTGA CATTTTAATT      2340
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1197

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TTGAAACAAA GATAAGGTTC GATTGAATAG ATTTATGTTC GTATTCTTTA GGTACCTATC    2400

TTATGATTTC AGGAAATGTC ATTAAAAAAA CGACTCATTT TCTCTAACCT GAAAAATAGA    2460

TTAGAGAAAA TGGGTTGTTT TATCTATTAT AGTTATTTGA ATGAAGmTAA GAAGAAGGTA    2520

TACTCACATC ATTCACATAA TCTGTATATT GACTATAAGT TTTAAAAAAC AATTTTTAAG    2580

CTCTTCCTTG TCTTCTCTAA CCAAGCGTGT TATAATGAAT ACTGCTCAAG CGACCTTCAA    2640

TCGTGAAGCA CACACGACCT TCAATCGTGA ATAAACGAAT AGATGGGAGA CTTACCATGA    2700

GTGATAACTC TAAAACACGT GTTGTCGTGG GGATGAGTGG TGGTGTTGAT TCGTCGGTGA    2760

CGGCTCTTTT GCTCAAGGAG CAGGGCTACG ATGTGATCGG TATCTTCATG AAGAACTGGG    2820

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TGGCAGACCA GATTGGCATT CCCTACTACT CTGTCAATTT TGAAAAGAG TACTGGGACC    2940

GCGTTTTTGA GTATTTCCTA GCGGAATACC GTGCAGGGCG CACGCCAAAT CCGGACGTTA    3000

TGTGCAACAA GGAAATCAAG TTCAAGGCCT TTTTGGACTA TGCCATAACC TTGGGGGCAG    3060

ACTATGTAGC GACTGGGCAT TATGCTCGAG TGGCGCGTGA TGAGGATGGT ACCGTTCACA    3120

TGCTTCGTGG CGTGGACAAT GGCAAGGATC AGACCTATTT CCTCAGCCAA CTTTCGCAAG    3180

AACAACTTCA AAAAACCATG TTCCCACTAG GACATTTGGA AAAGCCTGAA GTACGCAGAC    3240

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GTCAGCGTGG CGGACTCGGT ATCGGTGGGC AACACGGCGG TGACAATGCC CCTTGGTTCG    3480

TTGTCGGAAA AGATCTAAGC AAGAATATTC TCTATGTAGG ACAAGGATTC TACCATGATT    3540

CGCTCATGTC AACTAGCCTA GAAGCCAGTC AAGTCCACTT TACTCGTGAA ATGCCAGAAG    3600

AGTTTACGCT AGAATGTACG GCTAAATTCC GTTACCGTCA GCCTGACTCT AAGGTGACCG    3660

TTCATGTCAA AGGAGAAAAG ACAGAGGTCA TCTTTGCGGA ACCACAACGC GCGATTACAC    3720

CAGGACAGGC AGTTGTCTTT TACGATGGCG GG                                  3752
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(2) INFORMATION FOR SEQ ID NO: 209:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3580 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

1198
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 209:

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TATTTATATT TTTTTATCTC TGGCATACTT TGATACCTTT TTAGACTTAA AGTCTTTAAT        60

AGTGCCTTTC CACCTCTTTT TATCTATAAA GATTCTCCTA CATCATAATT CATTTTTTTA       120

TTTAAACCTT TCTGTCTTAG TTTGTCTTTA TCTTCTTCAT ACCATTTTAA GATTGTCACA       180

TAGTGGTTTT GATAGGTCTT ACCACTGCTT TCCATGTATC TGGATAGTTT ATTTATCATT       240

ATATCTGTGT GTGAGTTTAA TTTTTCTTTT AGATTTTTAT ATTCTTCTTT GCTTAACCTT       300

ACATTTTTGA ATTCTCCATA AAAAATGGGG GTGGACTTTT TATCTATCTC TCCCTCTCTC       360

TCTTTATCTA TCTCTATATC TTTCCATGTA ATTCCAATCT GGAGTACCTC TACTGTCTAT       420

CGGTAATTTA ATTTTGATAT CTGGCAATAC TGTGCTAGAT ATTTGATCTT TATATTCAGT       480

ATTTTTTAAA GCTTGCCTAA TAATTGAAGT TAAATAGAAT GCTACTTCTT TATTCAATTC       540

TTTATTTTTT AATTTTAAAC AATGAATTTT CATATCTAGG CTTGCTTTAT ATTTATGATA       600

AAAGACTGCT CCTAAAAATG AAACAGATAT AAAAATTTTCA AAAACTCTAT AATTTTTATC       660

ATCTATATCT TCGTAGTAAC CTAAGATACC ATTGTCAATA TTTGTAGCAC TAATTCTAGG       720

AGTTTTTCCA TCGAGTAAAT ATCTTTTTGG AATAGATGAG CCTGTTGGTA CTTAACTCGA       780

TTTCCCCTTT TTTTCGGTAA TAAATATTTC TTTTTATTTT GTTGTCTGAT ATTTTTCCTA       840

CCTGTCCTTT GTAGGATGAG TATTTTCTAG ATTTTCyTGA ATAACTTTTT ACTTGAAGTT       900

TTAGCTTTTG AACTAGTCGT TGTACTTTCT TTTTGTTTAT TATCAGTCCT GATCTTTTTA       960

ATATTGCTGT TATTCTCTAT ATCCTATTTT TCATTCATGA TATTCTTTTA CTAATTTTAT      1020

CTTAAATTCT GTGCTGTATT TGCCATTAAA AAACTGACCT CCTTTAGTTA GTTTTTTGGC      1080

CTAACTTTTG AGGGTCAGTT CAAAATTTGC GACTTTTAAA TGAATTCCAA TATTCAATTA      1140

TTAAGAGTTA ACATGGTGCT TGCCAATAGG AATCATTAGA GGCGAATTGG AAATAGGGTC      1200

ACGTATAATT TTTGCTTCAA GATTAAAGAT ATCTTTAACT AGTTTATCAT TTAGTATATC      1260

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TCTTGCTGTT AGATTTATAT CGTGCAAAAT CATGCAAATG GTTGTCTTAT ATTTTTGGTT      1380

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CTCATCTAAA AGTAGGATAC TTGTATCTTG GGCTAGGGCT AGAGCTATCC ATACTCTTTG      1500

CCTTTGACCC CCAGAAAGTT CTTCAACTAG GTTATTTGCT AGATCTTCAA CATTGGCCTT      1560

AACCATTGAT CTGTTTATTA TTTCAAGGTC ATCTTTTCCA AGACTCTTAA AAGGCTTTCT      1620

GTAGGGGAAA CGACCACGGC TTACAAGATC AGCTACTGTT ATTGATTCAG GGATTATTGG      1680

AGATTGAGGT AAATATAGCTA TGTGTTTTGC TAAATCTTTT TCTTTATAAG AATTAATTGA     1740
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1199

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TTTATTATCA AGCAATACTT CTCCCTCTAA TGGCTTTATA AGTCGAGACA AGGTTTTAAT     1800

GAGTGTTGAT TTCCCACAAC CATTTGACCC AATAATAACT GATATTTTTT CTTCAGGTAT     1860

TTTTATATTT ATATTTTCCA AGATTATTTT TTCATCATAA CCGCAGGTAA GATTATTTGA     1920

CCACAGACCT TTCATTATAT ATTCCTCCTG TTCATTTTTA TTAGTAAGTA TATTAAGTAT     1980

GGTGAACCTA ACAAGCCAGT TACAACACCT ACTGGATATC TAGCTGGTAA AATATTTTGA     2040

GAGAATATGT CTGATAACAA AACTAGTAAA ATTCCAACCA ATCCAGCTAA TATTGGGCTT     2100

CTTTTCTTGC CAATATTTAA GGCTATGGGA CCAGCTAAAA AAGATATACA AGCTATTGGT     2160

CCTGTAATTG AAGTAGAAAA AGCAGTTAAA GATACAGCGC AAAAAATTAA AACAAGCCTT     2220

GAAAGCTCGG GATTTGCTCC AAGTCCGATT GCTATTTCTT CACCAAGTTC AATAATTTCT     2280

AGTCTTTTAT TAAAAAATAA AACTAATATA GTAGCAATAA TACTTACTAT TAGAACAAGA     2340

GGTATGTCAT CTAACTTTGT AAAAGATAAA GAGCCACTGA GCCATCTCAT AACTTCTTGT     2400

AATTCATATC TTGCTACTTT CAACAATAAA AATGAGGTGC CTGCTCTTGT GACAGCTTGA     2460

AAACCAATAC CTAATATTAT CAGTCTTGCT GCTGAAAAAC CATCTTTTTT AGCTAGTAAA     2520

AATAATATTA AAGATGATGT TAGTCCACAA GTTATTGAAA TAATTCCAGT AGTTAAACTA     2580

TTTGTTTTTA ATACCAATAT GCAAAAGACC GCTGCAATAG ATGAAGAACT TGTGACACCG     2640

ATTATATCAG GACTTGCAAG AGGATTTCTT AACATAGTTT GAAAGATAAA TCCTGCCAAT     2700

CCAAAAGACC AGCCAGCTAT AATTCCTGCT AATAATTTTG GTAATCTAAT TTCCATAATC     2760

GAAAAACTAG CTCCAGGAAC AGTTTCACTA TTTAAGACTT TAATCAAAGT TGAAAAAGAA     2820

TAACTTTCAT CTCCGATAAG TAAAATGAAA AATGATAGAC TGATTATTAT TAATAAAAAT     2880

AGTGAGGAAA ATAGTGTTAT TCTATTTTTT CTTTTTTGAA TACCTATAAT TAAATTTTGC     2940

ATTAGTTATT AACCCCTCTA TTTTTCATAG TTACATAAAT AAGTACTGGA CCCCCGATTA     3000

TTGCAGTAAT TATCCCTACT TCAATTTCAC CTGGTTTACC TAACATACGG CCGATTATAT     3060

CACATATAAG CAAGAGCTCT GCACCTATAA AAGATGAAGA AATGGTCATT GTGCGTATAT     3120

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CACCAATTGC AGTAATACTT GAACATAAAA GCACACTTGC AATTATTGCA AGTGATCTTA     3240

TCCTATTAAC ATTAACTCCA AGACCAACAG CCATTTCATC ACCCATAGcT AAAGCGTTTA     3300

AATCTGATGA AATAAATATA GCTATCAAGT GACCTAAAAT TATAAAAGGT AGTAGTGTAG     3360

ATATAGAAGA TAATGTAGCT GCTCCAAGGC TACCTATTTG CCAAAATCTA AATTTGTCTA     3420

AGACGTTATT ATTCGGTAAA ATTAAAAAAC TTACAAAACT GCTTAAAGCC ATACTAACAC     3480
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                                   1200
AAGTTCCTGA TAAGGCAAGT TTTATAGGGG TAAGGCCTGC TTTTCCGTTA CAGCAATCGC          3540

GTATACAAAA ATTGCACTTA CTAAGCCACC AATGATTGCG                                3580
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(2) INFORMATION FOR SEQ ID NO: 210:

     (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 11378 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 210:

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CCAAATTGCT CCACAATTAT TATGGAGTCG TCGTTTGGCA GATGGGCGTG ATATGTGTGC           60

TCAAGAATGG TTGACAGGCA AGATATTGAC CCCCTATGAT ATGAATCGTA AGCAAATCGT          120

CAATATTTTA ACCCGTCTTC ATCGCTCACG TCCGTTGATG ACACAATTGA GTCGTTTGGG          180

CTATGCCATG GAAACACCTG TAGATTTACT ACAGTCTTGG CAGGAAACGG CTCCAGATGC          240

TTTGCGTAAA AATCATTTTA TCAGTGAAGT GATGGCTGAT TTACGTCAGA CTATTCCAGG          300

ATTTAGAGAG GACCATGCGA CCATTGTCCA TGGAGATGTA CGACATAGTA ATTGGATTGA          360

GACAGATAGT GGCTTGATTT ATTTAGTAGA TTGGGATTCG GTTCGCTTGA CCGATCGCAT          420

GTTTGATGTG GCCCATATGC TCTGCCATTA TATTTCAGAA CATCAGTGGA AGGAATGGTT          480

GACCTACTAC GGTTACAAGT ACAATCAAAC GGTATTAAGT AAATTGTATT GGTATGGTCA          540

ATTGTCTTAT TTGAGTCAGA TTTCCAAGTA TTATATGAAC CAAGATTTAG AAAATGTCAA          600

TCGGGAGATT CATGGTTTGC GTCATTTCCG AGACAAGTAT GGAAAGAGAA GATGAGAGTT          660

AGAAATCGTA AAGGGGCAAC AGAATTACTA GAGGCAAATC CCCAGTATGT GGTCCTCAAT          720

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TTTGAAGACG GTGAGATTGA TCGCTTGTAT CTGAACTTTT CAGATCCATG GCCGAAAAAA         1020

CGCCATGAAA AGCGTCGTTT GACCTACAAG ACCTTCTTGG ATACCTTCAA ACGTATCTTG         1080

CCTGAAAATG GAGAAATTCA TTTCAAGACG GATAACCGTG GCTTGTTTGA GTACAGTTTA         1140

GTGAGCTTTT CTCAATATGG CATGAAACTC AATGGTGTCT GGTTAGATTT GCATGCCAGT         1200

GATTTTGAAG GCAATGTCAT GACAGAATAC GAGCAAAAAT TCTCAAACAA GGGGCAAGTT         1260

ATCTACCGAG TTGAGGCAGA ATTTTAAGAG ATAACCTAAA ATTAGGCTGT ACAAGTGCTT         1320
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1201

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GGGAAATATC TTCGCCTCTT GCTTATGAGG AGGTGGACGC AATCGCAACA ATCGTAGAAT   1440

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GACTATGGAA TATATGGACA AGACGCGTAA GAAAACCGTC CAAATTCCAT ACAGTTTAGT   1860

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AAAGTGAAGA AAACATGAGT AAAGAAATGC TAGAGGCCTT CCGCATTTTG GAAGAAGACA   1980

AGGGAATCAA AAAAGAAGAT ATCATCGACG CAGTAGTAGA GTCGCTTCGT TCCGCTTATC   2040

GCAGACGCTA TGGTCAGTCA GACAGCGTAG CTATTGACTT CAACGAAAAA ACAGGTGACT   2100

TTACAGTTTA TACTGTCCGT GAAGTTGTTG ATGAAGTATT TGATAGCCGT TTGGAAATCA   2160

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GCATCGAAGC CCAATTGTCA AAACAAGACC AAATTCCTGG AGAAGTTTTT GCTTCTCATG   2460

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GCGAATTTGA AGCCATGGAA GACGCTGCTT CAGTAGAGTT GGAAGTAGAA AACGATACTG   3060
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1202

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AGTCTGTTGT GTCTAACGAA GTGATTGATA AGCGTGATTT GCTCCGCATT GTCAAGAACA        3180

AGGAAGGACA AGTCTTTATT GATcCTACGG GCAAGGCCAA TGGCCGCGGC GCTTATATCA        3240

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GCATGGAAGT GGAAGAAAGC TTTTATGACG AGTTGATCGC TTATGTGGAT CACAAAGTGA        3360

AAAGAAGAGA GTTGGGACTT GAATAAGCAA AAGATAAGTA ATCTCTTGGG GCTTGCTCAG        3420

CGAGCAGGGC GCATCATATC GGGTGAAGAA TTGGTGGTCA AGGCCATTCA AGACGGCAAG        3480

GCCAAGTTGG TCTTTCTAGC TCATGATGCT GGACCCAATC TGACCAAGAA GATTCAAGAT        3540

AAAAGTCATT ATTATCAAGT AGAAATTGTA ACCGTGTTTT CAACACTGGA ATTAAGCATA        3600

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CGCAAAAGAA CTTGGAAAAG AAAGTAAAGA AGTTGTAGCG CGTGCAAAAG AGTTGGGCTT        3780

GGATGTGAAA AGCCACTCAT CAAGTGTGGA AGAAGCTGTC GCTGCAAAAA TTGCTGCCAG        3840

CTTTAAGCCT GCAGCTGCTC CGAAAGTAGA AGCAAAACCT GCAGCCCCAA AAGTAAGTGC        3900

AGAAAAGAAA GCCGAAAAAT CTGAGCCAGC TAAACCAGCT GTAGCTAAGG AAGAGGCAAA        3960

ACCTGCAGCC CCAAAAGCAA GTGCAGAAAA GAAAGCCGAA AAGTCTGAAC CAGTAAAACC        4020

AGCTGTAGCC AAGGAAGAGG CAAAACCAGC TGAGCCAGTC ACTCCGAAAA CAGAAAAAGT        4080

AGCGGCTAAA CCGCAAAGTC GTAATTTCAA GGCTGAGCGT GAAGCACGTG CTAAAGAGCA        4140

GGCAGAGCGA CGCAAGCAAA ATAAGGGCAA TAACCGTGAC CAACAACAAA ACGGAAACCG        4200

TCAGAAAAAC GACGGCCGTA ATGGTGGAAA ACAAGGTCAA AGCAACCGCG ACAATCGTCG        4260

CTTTAATGAC CAAGCTAAGA AGCAGCAAGG TCAGCAAAAA CGTAGAAATG AGCGCCGTCA        4320

GCAAGAGGAT AAACGTTCAA ATCAAGCGGC TCCACGTATT GACTTTAAAG CCCGTGCAGC        4380

AGCCCTAAAA GCAGAGCAAA ATGCAGAGTA CGCTCGTTCA AGTGAGGAAC GCTTCAAGCA        4440

GTATCAGGCT GCTAAAGAAG CCTTGGCTCA AGCTAACAAA CGCAAGGAAC CAGAGGAAAT        4500

CTTTGAAGAA GCGGCTAAGT TAGCTGAACA AGCACAGCAA GTTCAAGCAG TGGTTGAAGT        4560

CGTCCCTGAG AAAAAAGAAC CTGCAGTGGA TACACGTCGT AAAAAACAAG CTCGACCAGA        4620

CAAAAATCGT GACGATTATG ATCATGAAGA AGATGGTCCT AGAAACAAC AAAAGAATCG        4680

AAGTAGTCAA AATCAAGTGA GAAATCAAAA GAATAGTAAC TGGAATAACA ACAAAAAGAA        4740

CAAAAAAGGC AATAACAAGA ACAACCGTAA TCAGACTCCA AAACCTGTTA CGGAGCGTAA        4800

ATTCCATGAA TTGCCAACAG AATTTGAATA TACAGATGGT ATGACCGTTG CGGAAATCGC        4860
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1203

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AGATGGTTAT CTCAATGAAG ATGAATTGGT TGAGCGTCCA CCAGTTGTTA CTATCATGGG     5100

ACACGTTGAC CACGGTAAAA CAACCCTTTT GGATACTCTT CGTAACTCAC GTGTTGCGAC     5160

AGGTGAAGCA GGTGGTATTA CTCAGCATAT CGGTGCCTAC CAAATCGTGG AAAATGGTAA     5220

GAAGATTACC TTCCTTGATA CACCAGGACA CGCGGCCTTT ACATCAATGC GTGCGCGTGG     5280

TGCTTCTGTT ACCGATATTA CGATCTTGGT CGTAGCGGCA GATGACGGGG TTATGCCTCA     5340

GACTATTGAA GCCATCAACC ACTCAAAAGC AGCTAACGTT CCAATCATCG TAGCTATTAA     5400

CAAGATTGAT AAACCAGGTG CTAACCCAGA ACGCGTTATC GGTGAATTGG CAGAGCATGG     5460

TGTGATGTCA ACTGCTTGGG GTGGAGATTC TGAATTTGTT GAAATTTCGG CTAAATTCAA     5520

CCAAAATATC GAAGAATTGT TGGAAACAGT CCTTCTTGTG GCTGAAATCC AAGAACTCAA     5580

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TTCAAATGCC TTTATCGTTG GTTTCAACGT ACGCCCTACA CCACAAGCTC GTCAACAAGC     6180

AGAAGCTGAC GATGTGGAAA TCCGTCTTCA CAGCATTATC TACAAGGTTA TCGAAGAGAT     6240

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GGTTATCCGT GAAACCTTCA AGGTGTCTAA AGTGGGAACT ATCGGTGGAT TTATGGTTAT     6360

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GGCGTATGTC ATGGAAGAAA TCAAGAGATA AGATTTTTTG CTCCTTTCTT AGGTGGTGAG     6600
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                                    1204
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TTCAAATTGA ACTTCGTTTC AATTTAAACT GAAAATCAAG AAGTTTAAAA TAGCTAGGTC    6780

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TCCAAAAGAT ATTCCTACCT TATTGGAACA AGGTCCAACG ACTCTTCTAT CTCAAGAAAT    7620

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TCAATTTTAT GCTTTCTCTC TGAAATTGGC TCAAGAATTA GGTTATATTT ATGGTTATGA    7800

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CAAAGGAATG GGGAAATTTA TTCCTATCTT GGGTGGTATC ATTTCAGGTG GTTTAACCTT    8100

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CCGTGCAAGG TGTAAAAGTG ATGAAAACGA TAAAGAAAGC TGACCATGTC GTTGTTGGTC    8340

TGGGGAAACT TTTTATTGCC GACAAGTTAA TGGATACGGC TCGGTGGCTC ATTAAGCCAG    8400
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1205

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GGATTGTGAA ATTCTTTTGG ATGATCATCT CTTTTGCAGT CCAATTGCTG TTTTACAAGA    8520

TAGTGTTTAA GATATTGGAT TGGCTCTTTA AACTTATCTA GATGGTAATC CAAGTTGCAG    8580

AGAACTAGCA GGAACTCCAC TGCTAGTTTT TTATTCTCTT TCCATATGGT ATAATATAAG    8640

CAGTAAAATC ATTTTATACT CTTCGAAAAT CTCTTCAAAC CACGTCAGCT TCACCTTGCA    8700

GTATATATGT TACTGACTTC GTCAGTTCTA TCCACAACCT CAAAACGGTG TTTTGAGCTG    8760

ACTTCGTCAG TTCTATCTAC AACCTCAAAA CACTGTTTTG AGCAACCTGC GGCTAGCTTC    8820

CTAGTTTGCT CTTTGATTTT CATTGAGTAT TAGAACATAC AATGGAGGTC GTCATGGACA    8880

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CATCCGTCCG TCAGAGAAAT GGGTGCCAGA ACGACAGAGC TTTATTGAGG AAAAGATTGC    9900

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TCATCTCCCT ATGGAGATTA CCTTTGTCAA TAAAGAAGAT ATTTTCCAGT ATTACAATGA    10140
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1206

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CGAACTCTGC CATCCGCCTA AGTACTTGGA CAAGGTCAAA ACTATCATGA AGGGGCTTCG    10260

TGAGGGAAGC AAAGACAAGT ATGAAATGTG GTTCAAGTCT GAGTCGCGAG GTAAGTTTGT    10320

CCACATCACC TATGCTGCAG TACACGATGA AGACGGAGAA TTCCAAGGAG TGTTGGAGTA    10380

TGTTCAGGAT ATCCAGCCCT ACCGTGAGAT TGATACGGAC TATTTTCGTG GATTAGAATA    10440

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GGACTTCCAC TTGATCGTGC CAAGACTTTC TATGATGAAG GAATCAAGTC TGCTTCAGAT    11100

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AAAAAATCTT GCTACAATAG AGCCATTAGA GGTGTTTTGA ATCCCACATT TTACAGAAAG    11280

TGGCGGCGCT GAGAAGTCCA CAAATGTGTC AAAACTGGTT GCTAATGGAT GAAAAATTGA    11340

AATAAAAGTG TCTTTTTGCT TTAAAGACGA GAGTTGCG                            11378
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(2) INFORMATION FOR SEQ ID NO: 211:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 4156 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 211:

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CCGCGAGCCA CGGCGAATTT GCTGCGGGTA TTCATCAGTC AGGATCTATG ATCTTTGGTG    60

AACAAGAAAA GGTTCAAGTT GTGACCTTTA TGCCAAATGA AGGTCCTGAT GATCTATACG    120

CTAAGTTTAA TAACGCTGTT GCTGCATTTG ACGCAGAAGA TGAGGTTCTA GTTTTGGCTG    180
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1207

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ACCTTTGGAG TGGTTCTCCA TTTAACCAAG CTAGTCGCGT GATGGGAGAA AATCCTGAGC    240

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GCCTCATGGA CGCTGCTGCA GGTGTAGAAA AAGTCGCTGC TAATATCATT AAAGAAGCCA    360

AAGATGGCAT CAAAGCTCTT CCAGAAGAGC TAAATCCAGT CGAAGAAGTT GCAAGCGCTG    420

CAGCTGCTCC AGTTGCCCAA ACTGCTATCC CAGAAGGAAC TGTTATCGGA GACGGTAAAT    480

TGAAAATCAA TCTTGCCCGT CTTGACACAC GTCTACTTCA CGGTCAGGTT GCAACTGCTT    540

GGACTCCAGA TTCAAAAGCA AATCGTATCA TCGTTGCTTC AGATAACGTG GCTAAAGACG    600

ACCTTCGTAA AGAATTGATT AAACAAGCAG CTCCAGGTAA TGTCAAGGCT AACGTGGTTC    660

CAATTCAAAA ACTGATTGAG ATTTCAAAAG ACCCACGTTT TGGAGAAACA CATGCCCTTA    720

TCTTGTTTGA AACACCTCAA GATGCCCTTC GTGCCATCGA AGGCGGCGTG CCAATCAAGA    780

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ATGTCCGTAA AGTACCAAAT GATTCTAAAA AAGATTTGTT TGACTTGATT AACAAAGCCA    960

ATGTCAAATA AGCCATTATT TATGAAAGGA TTTTAAACAT GTCTATTATT TCTATGGTTT   1020

TAGTAGTCGT TGTAGCCTTC TTTGCAGGTC TTGAAGGCAT CCTCGACCAG TTCCAATTTC   1080

ACCAACCACT TGTAGCCTGT ACCCTTATTG GGCTTGTAAC AGGTCACTTG GAACCAGGGA   1140

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ACTTTACCAA GACTGGTATC GGTGTTGCCC AAGCGGTTGC TATCCCTCTT GCTGTAGCTG   1320

GACTTTTCTT GACAATGATT GTTCGTACAA TTTCAGTTGG TTTGGTTCAT ACTGCAGATG   1380

CTGCCGCTAA AAAAGGTGAC TTCGGCGCTG TGGAGCGTGC GCATTTCATC GCGCTACTTT   1440

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ATGGTGGCGG AGGAGCCGCA ACTTCTAACG ACCCAATCGG CGATATCCTA GAAGACTACT   1800

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TAAAAAAGTT TGGTGGCGTT CAACCTTCTT ACAAGGGTCT TGGAACTTTG AACGGATGCA   1920
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1208

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AAACTTGGGC TGGGCTTATA CACTCATTCC AGCTATCAAA AAACTCTATA CTAAAAAAGA    1980

AGATCAAATC GCTGCTCTTG AGCGTCACCT TGAGTTCTTC AACACTCATC CATACGTAGC    2040

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CGATGACGCT GCTATCCAAG GGGTTAAAAT CGGTATGATG GGACCTCTTG CTGGTATCGG    2160

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TTGCATGTAC TTACTTAAGA AAAAGTATC TCCAATCACT ATTATCCTTG CCCTCTTCGC     2700

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TAGGCACGAC ACCGTATTTT TCAAAGAGGG AAACGACCAT ATCCCATTGA CCGCCATCTT    3720
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1209

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AATGACTTGC TCCAAGAACC AGTTTGATTT CTCATACTTA TCCCAGAAGA AAGTGTGGGC 3840

TTGTGACAAC TCAAAGTTCT CCAATTTGTA TTGCGAGATG AGTTTGTGGC GGAAGGTGTT 3900

GAGAGCCGCA AACATCCAGC AACGACCAGA CGCTTTCTGG TTAGTGACCT TGTCCTTGGT 3960

TAAATCCAAT GAGAAAACAG GTGTGTTGTC TACATGGCTT TGGCGACGTT CCAGAGCTGC 4020

AAAAATTCCG TTGTGGCTGG CAGCATTTTC AATCGCTTGG TATTTTACAT TTGCTTCATA 4080

GTTGGCAAAT AGTTTATCAG TAAATGATTC TTGAATCGCG TTCATAGATT CCTCCTTTTA 4140

GTCTACAGTG TATTGG 4156

(2) INFORMATION FOR SEQ ID NO: 212:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3902 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 212:

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AGTACGGCAA GGCGAAGCTG ACGTGGTTTG AATTTGATTT TCGAAGAGTA TTAGTGCAAA 240

CCGTAGTTGT AGTCATCATC TTGCATGGCT TCAACTTCGC CAAGAAGGTA ACCATTTCCG 300

ACTTGAGAGA AGAAGTCATG GTTGGAAGTT CCTGTTGAAA TACCGTTCAT AACGATTGGG 360

TTGACATCTT CAGCTGAATC TGGGAAAAGT GGATCTTGTC CCATGTTCAT GAGAGCTTTA 420

TTGGCATTGT AGCGAAGGAA GGTTTTAACC TCTTCAGTCC AACCAACACC GTCATAAAGA 480

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GTTTCGAGGA AGACGCTGGC AACTTTCTTT TCAAGTGGGC TGCCGTTTAG GTAGATTTCG 780

TTGACAATCT CAGCCTTCTT TTGTAGGTAA GGATTGGTAT TGGTCCATTC GAAAATTTCT 840

TCAATCTCAG CCTTAGTATT CAAGGTAGAA AAGATTGATG AGTAAGATTT AGCGTGGACA 900

1210

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CGAAGGGCTT GAACCCCAGT TTCAGATTGC ATAGTGTCAA GAAGGGTTAA ACCACCAAAA       1020

ACTTTTCCGA CCAAGTCTTT CTCTTTGTTA GATAGCTTTC TCCAGTCATC CAAGTCGTTT       1080

GATAAGGGAA TACGTGTATC GAGCCAAAAT TGCTCCGTCA GTTTTTCCCA AGTTGATTTG       1140

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GCGCATGAAG AGGGTGAGTG AAAGTCCTTG ATCCACGTGT TCAGTCGCAG CAGCGTAAAC       1620

ATCGATGACT TTACGCATAT CCATATCGTA GGCAGAAGTG TAGTAAGGAA TGGTTTCTGT       1680

AGACAAGCCA GCAGCAGGGT AATAGATTTT ACCAATTTTC TTCTCTTGGC GTTCTTCGAT       1740

ACGTTGCGTA ATCGGGTGGA TAGAAGCAGA AACGTCGTTG ATATAGCTGA TAGAACCATT       1800

TGGCGCTACA GCAAGGCGAT TTTGGTGGTA AAGACCATCT TCTTGAACCT TGTCGCGAAG       1860

TTCAGCCCAA TCAGCAACAC CAGGGATAAA GACATTTTTG AAGAGTTCTT TAACACGGTC       1920

TGATGTTGGA ACAAATTCAC CAGTTACATA CTTGTCAAAG TAACTTCCGT TAGCATAGTC       1980

TGATTTTTCA AAGTTGTGGA AGGTAATACC ACGTTCACGT GCAATATTGT TTGACTCTAC       2040

CAAGGTCCAG TAGTTCATAA GCATAAAGTA GATGCTTGTA AATTCAACAG ACTCAGGTGA       2100

ACCATATTCA ATGAGTTGTT GGGCAAGGTA GCTGTGCAGT CCCATGGCAC CGAGACCAAA       2160

GGTGTGGGCT TGGCTATTTC CATGGTCAAT CGTTGGTACA GCTACGATAT GTGAACTATC       2220

TGTAACGAAA GTAAGGGCAC GAACCATAGC ACGGATAGAA CGACCAAAAT CAGGTGAAGT       2280

CATCATGTTA ACCACGTTGG TTGAACCCAG GTTACATGAA ACATCTGTTC CCATTTGAAG       2340

GAATTCTTGA GCATCGTTGA TCAAGCTTGG TTCTTGAACT TGAAGAATCT CAGAACACAA       2400

GTTACTCATG ATAATCTTTC CATCAACAGG ATTTGCACGG TTAGCCGTAT CGATGTTGAC       2460

TACATAAGGA TAGCCAGACT CTTGTTGCAA TTTAGAGATT TCAGTTTCCA AATCCCGCGC       2520

CTTGATTTTT GTCTTGCGAA TATTTGGATT TGCGACCAAT TCATCGTATT TTTCAGTAAT       2580

GTCGATGTAA TTGAATGGCA CACCGTATTC TTTTTCTACA GAGTAAGGGC TGAAGAGGTA       2640

CATTTCTTCA TTTTTACGAG CCAATTCGTA GAATTTATCA GGTACTACAA CACCAAGTGA       2700
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1211

TAGAGTCTTG ACACGTACTT TTTCATCAGC GTTTTCTTTC TTAGTTGAAA GGAAAGCGAT   2760

GATATCTGGG TGAAAGACGT TGAGGTAGAC AACACCAGCA CCTTGACGTT GCCCCAATTG   2820

GTTGGAGTAA GAGAAGCTGT CTTCAAAAAG CTTCATAACA GGAACGACAC CTGAAGCAGC   2880

TCCTTCATAG CCTTTGATAG GTGCACCAGC TTCACGAAGG TTGCTGAGGG TAATTCCCAC   2940

ACCACCACCA ATACGTGAAA GTTGAAGAGC TGAGTTGATA GAACGCCCGA TAGAGTTCAT   3000

ATCATCCGTC ACTTGGATTA GGAAACAAGA TACCAACTCC CCACGACGAG CACGTCCAGC   3060

ATTCAAGAAG GAAGGAGTAG CAGGTTGGTA GCGTTGGTGG ATGATTTCAT TGGCAATATC   3120

GATTGCAACA GCTTCATTCC CATCAGCGAA ATAAAGGGCA TTGAAGAAGA CACGGTCTTC   3180

CATATTTTCA AGATAGTATT CACCGTCATT AGTCTTTAAG GCATATTGAT TGTAAAATTT   3240

ATAAGCTGCC ATGAATGACT TGAATTGGAA GTTTTGGTCT TTGATAAATT GAGCTAATTC   3300

TTCCAAGAAC TCTGGACGGT ATTTCTTGAT AAAGGCTGTT TCGATGTAGT TGTGTTCAAT   3360

GAGGTAATTG ATTTTGTCTT TGATTGAATC AAAAACCATA GTGTTTGGAA CTACATTTTC   3420

TTTAAAGAAA GCATCCAAGG CTTCCTTGTC TTTATGAAGC ATGATTTGTC CATTAACAGG   3480

ACGGTTAATT TCGTTATTAA GACGGAAGTA AGTCACGTCT TCAAGATGTT TTAATCCCAT   3540

AAAATTTCCC TTATCTAATT ACAAAAGAAA GGCTTCTAAG TTAGCCCTAA AAGCAGTTTC   3600

TTCTGGATGA TGTACTAAGA TTATGCTAAT TGTTTCAGTT TTCCTGGTTG GAAACCTGAA   3660

AAGACTTCAG TTGGTGTTTG GATAACAGGA GCTGCGCTAA AACCGAGCTC TTTAACTTGA   3720

TCGACGTACT CAGGTTGCTC ATCAAGATTG ATTTCACGAT AAGAGACATT ATTACTGTCC   3780

AAGAAACGCT TGGTCATTTT ACATTGGACA CAATTGTTTT TAGAATAAAC GGTTACCATT   3840

GTGTAACTCC TCTTCAAAAT TTAATACTAT CTTAGTATAT CAGAAAATAA AATTTTGTCG   3900

GG   3902

(2) INFORMATION FOR SEQ ID NO: 213:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 2456 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 213:

TATTGAAGCT ATTGTAGACT ACAAAGATAA GGATTTGCAG TTAGTAGGCG GTGAGACTCA   60

CTGATAACCT AAAAAGGATA GTCAATTATG CTTGTTTACT AACTATTAAC TATGCTAAAT   120

1212

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CAATTGAGGT TGTTTACATA AAACTCTATA TCAGAGAAGC CTGATATAGA GTTTTTTCTT        180

GCTAGTTTTA GGATTTTTTT GTAAAATAGA AAAAGTGAAG AGAGGTATGA AATGAGCAAG        240

AAAGATAAAA AAATCGAAAT TCAAGTAGCG GATGCCAAAG TTAATGTTGG TAAAGACAGT        300

TTTGAAGGTT ATACATTGAC TATCGGTAAA AAAGTTATCG GAGAAATTGC CGAATTAGAC        360

GGACAATTTG CCATTATAAA GAATGGGAAT GTCGATAGTT TTTATAAAAA ATTGGAAAAA        420

GCTGTGGAAA TTTTGATTGA AAATTATAAT TTAGCAAAAT AAGTCTTGTT TTTTTGAAAT        480

TTTCATGATA TAATAGTCCA TGTTGATTGT AGGAGAGATA GCGAAGAGGC TAAACGCGGC        540

GGACTGTAAA TCCGCCCCTT CGGGTTCGGG GGTTCGAATC CCTCTCTCTC CATTTCATTA        600

ATGGGGTATA GCCAAGCGGT AAGGCAAGGG ACTTTGACTC CCTCATGCGT TGGTTCGAAT        660

CCAGCTACCC CAGTTCTTAG GTAATAATCA AGATAGAAAG CAAAATATCT TAGGGTATTT        720

TATTTTTATA ATTGAAAGAC GTGAATGATA TGAACATGTC CTTGCGGGTG CTTAGGAAAA        780

AAATTATAAG TATGTCAAGT TTAAGAAAAA CTTGATTGTT GGAGGATTTT TTAGATGAAC        840

GAATTTGAAG ATTTGCTAAA TAGCGTTAGT CAAGTTGAGA CTGGTGATGT TGTTAGTGCT        900

GAAGTATTGA CAGTTGATGC GACTCAAGCT AACGTTGCAA TCTCTGGAAC TGGTGTTGAA        960

GGTGTCTTGA CTCTTCGCGA ATTGACAAAC GATCGTGATG CAGATATCAA TGACTTTGTT       1020

AAAGTAGGAG AAGTATTGGA TGTTCTTGTA CTTCGTCAAG TAGTTGGTAA AGATACTGAT       1080

ACAGTTACAT ACCTTGTATC TAAAAAACGC CTTGAAGCTC GCAAAGCATG GGACAAACTT       1140

GTTGGTCGCG AAGAAGAAGT TGTTACTGTT AAAGGAACGC GTGCCGTTAA AGGTGGACTT       1200

TCAGTAGAAT TTGAAGGTGT TCGTGGATTT ATCCCAGCTT CAATGTTGGA TACTCGTTTC       1260

GTACGTAACG CTGAGCGTTT TGTAGGTCAA GAATTTGATA CTAAAATCAA AGAAGTTAAC       1320

GCTAAAGAAA ACCGCTTCAT CCTTTCACGT CGTGAAGTTG TTGAAGCAGC TACTGCAGCA       1380

GCTCGCGCTG AAGTATTCGG TAAATTGGCT GTTGGTGATG TTGTAACTGG TAAAGTTGCT       1440

CGTATCACAA GCTTCGGCGC TTTCGTCGAC CTTGGTGGTG TTGACGGATT GGTTCACTTG       1500

ACTGAATTGT CACATGAACG TAATGTATCA CCAAAATCAG TTGTAACTGT TGGTGAAGAA       1560

ATTGAAGTGA AAATCCTTGA TCTTAACGAA GAAGAAGGAC GTGTATCACT TTCACTTAAA       1620

GCAACAGTAC CAGGACCATG GGATGGCGTT GAGCAAAAAT TGGCTAAAGG TGATGTAGTA       1680

GAAGGAACAG TTAAACGTTT GACTGACTTC GGTGCATTTG TTGAAGTATT GCCAGGTATC       1740

GATGGACTTG TTCACGTATC ACAAATTTCA CACAAACGGA TTGAAAATCC AAAAGAAGCT       1800

CTTAAAGTTG GTCAAGAAGT TCAAGTTAAA GTTCTTGAAG TTAACGCAGA TGCAGAACGC       1860

GTGTCACTTT CTATTAAAGC TCTTGAAGAA CGTCCAGCCC AAGAAGAAGG ACAAAAAGAA       1920
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1213

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GAAAAACGTG CTGCTCGTCC ACGTCGTCCA AGACGTCAAG AAAAGCGTGA TTTCGAACTT    1980

CCAGAAACAC AAACAGGATT TTCAATGGCT GATTTGTTTG GTGATATCGA ACTTTAATCA    2040

AATTGAAAAT TCACAAAATC CTTTGTTTAC TAAACAAGGG ATTTTTCTGG CTCTTTGTCA    2100

ACTGTAGTGG GTTGAAGAAA AGCTAAGCTC GAGAAAGGAC AAATTTTGTC CTTTCTTTTT    2160

TGATATTCAG AGCGATAAAA ATCCGTTTTT TGAAGTTTTC AAAGTTCCGA AAACCAAAGG    2220

CATTGCGCTT GATAAGTTTG ATGAGATTAT TGGTCGCTTC CAGTTTGGCG TTAGAATAGT    2280

GTAGTTGAAG GGTGTTGACA AGCTTTTCTT TATCTTTGAG GAAGGTTTTA AAGACAGTCT    2340

GAAAAATAGG ATGAACCTGC TTAAGATTGT CCTCAATAAG TCCGAAAAAT TTCTCCGGTT    2400

CCTTATTCTG AAAGTGAAAC AGCAAGAGTT GATAGAGCTG ATAGTGGTGT TTCAGG        2456
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(2) INFORMATION FOR SEQ ID NO: 214:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 10974 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 214:

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AAATAGGATA TAGAGACATC CTTCTGATCT GCTTTTwACA AAGTCCAATT ATATGCGGAT    60

CTATACCTCC ACAATGTCCA TTATTATmCC TAACTATAAT ATGAGCCGAA AACACTATAT    120

CCTTAATGTC TCCATATCCA TCAGGGATAT TAATATTTAT TTTTCCACAA CTATATTGCA    180

TTGTAACCAT CTCCTTAAAC GACGCATTAT GATATTTGAT AGAGAAATTT TTATGAATAA    240

CTCAATAATT TTATAGTAAA TCATGCTTAT ATCTCAAAGA TACCTATTTT ATCTTGTCTC    300

GACCTTCTCC AAAGAATTGC TATAATACTA TTACAAATCC ATCTGCACTA CACTTCAAAT    360

TTTAGCACTG TATAAAAACG TTTCAATACA CTAACTTCAA GAAAACTTCC ACTATTAATT    420

GAAAAAATTG ATAGAGATAA ATTAAAAATC TATATTGAAA CTCATCCCGA TGCTTATTTG    480

ACTGAAATAG CTGCTGAATT CAACTGTCCT CCAACAACTA TTCATTACGC TCTAAAGGCT    540

ATGGGATATA GTCTAAAAAA GAGCCGTACC TACTGCGAAC AAGACCCAGA AAAAGTAAAT    600

CGGTTCCTTA AAGAATTGAA TCACTTAAGC TACCTGACTC CTATTTATAT TTATGAGACA    660

GGGGTTGAGA CCTATTTTTA TCTCGAATAT GATCGAGCCT TGAGCAGGCA GTTAGTCTCT    720

CTGGAAGAAG ATATAATTAT TTGAATTAAG ATCGAGACAA CGCACACCAG AGATTGCGAT    780

ACTGTTATAG AAGTACTAAT GCCCTTTTTT GTTTCAATAT ACTATGGCTC CGATGACCTA    840
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                                1214
      TAAAGATACG ATGACGAGTG ACTTTTTCGA AGCTTGCTTC CAAAAATTCT TACTACCTAC      900

      TTTAGATACA CCATCCCTTA TCATTATGGA CAATGCAAGG TTTCACAGAA TGAACATGTG      960

      TAAGGAGCAG GGCATAGACT GTTACCACTT CCTACCTATT CACCCGAGTA TAATCCCATT     1020

      GAGAAAATAT GGGCTTACAT CAAAAACATC TCAGAATAAT ATTGTCAAAT TACGATGCTT     1080

      TTCTTGAGGC ACTTTTGTCC TATTCTTGTT TCAGCCGACT ATACTCCGTT ATTGGGCAGC     1140

      TACGGAACAG TCGATGGGAC GATGGGGGGA CATAAAAAAA TCCTCCAGTT TTGTTTTTTA     1200

      TAACAGTATA CTGGAGAATT GACAATCTCG GTAGATACCT CGTTATAGCG CGGTTACTTA     1260

      TTAGGCAGTT ACAAACAAC TGTGAACAGA AAACATTCCA GAGTCAGACA AGACTTTGGA     1320

      ATGTTTTGGC TCTATAATTT CTGTAGTGGG TAATCCCACC CCAGGAATTA TAGGGTCGTT     1380

      TCTTGTAGAA AAAAGCCCC ATATGACCTA TAATGAAAG CGTCTAACCA ACTCATTAGA     1440

      AAGGGTTCAT ATGGAACAAC TTAAGAATAC CACAGATTTG CTCGGATTGG AAGACAAAAA     1500

      TATCAAAATC TTGTCTGTTC TGAAATACCA AACCCATCTA GTCGTTCAGG CAAAGTTGGA     1560

      TTCCCCCGCT CCTCCTTGTC CTCATTGTCA AGGGAAGATG ATCAAATACG ACTTCCAGAA     1620

      AGCCTCTAAA ATTCCGCTTC TCGACTGTCA GGGTTTACCC ACGGTACTGC ATCTCAAAAA     1680

      GCGCCGCTTT CAGTGCAAGA ATTGCCTTAA GGTGGTCGTT TCTCAAACAT CCATTGTCAA     1740

      GAAAAATTGC CAGATTTCCA ACATGGTGAG ACAAAAAATC GCTCAGCTCC TCCTTGAAAA     1800

      GCAGTCTATG ACTGAGATTG CCCACAGATT GGCGGTCTCA ACTTCCACCG TCATCCGAAA     1860

      ACTGAGGGAA TTTAAGTTTG AAACCGATTG GACCAAGTTG CCAAAAGTTA TGAGTTGGGA     1920

      TGAGTATAGC TTCAAAAAGA GCAAAATGAG CTTCATTGCC CAAGATTTTG AGTCCAAATC     1980

      CATCCTCGCA ATTTTAGACG GGCGAACTCA TGCGGTGATT CGAAACCATT TCCAACGCTA     2040

      TCAGAGAGAG GTTCGGGAGC TGGTCGAGGT CATCACCATG GACATGTACA GCCCTTATTA     2100

      TCGGCTCGCT AAGCAACTCT TTCCAAAGGC GAAGATTGTT CTTGACCGCT TCCACATTGT     2160

      CCAACATCTG AGCCGAGCTA TGAACCGAGT ACGAATCCAA ATCATGAACC AATTTGACCG     2220

      AAAATCCTTG GAGTATCGGG CGCTCAAGCG CTTTTGGAAC CCTCGCTTTT TCGTTTCTAG     2280

      GCTCGGGCTA AATCAGTCCA CTGGACTGAT TTACTACACC AGTATAGCTT CAAGCTCTGT     2340

      CAGAAACGAT TCTATCAGCC CACGTTTCGA ATGCACTTAA CCCATCGGGA AGTACGAGAT     2400

      AAGCTGCTTT CTTACTCTGA GGGATTACAG GTTCACTACG AACTCTATCA ACTCCTGCTC     2460

      TTTCATTTTC AAGAGAAGAA TGCCGACCAT TTCTTTGGAT TGATTGAGCA AGAACTGCCA     2520

      ACGGTTCATC CGCTTTTTCA AACGGTCTTT TGGACTTTTT TAAGGGATAG AGATAAGATT     2580

      ATCAACGCAC TTAAGCTGCC TTATTCCAAC GCTAAACTTG AAGCGACCAA TAATTTGATT     2640
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1215

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AAGATTATCA AGCGCAAAGC CTTTGGTTTC CGGAACTTTA ACAATTTTAA AAAACGGATT      2700

TTGATGACTT TGAACATCAA AAAAGAGAGT ACGAATTTCG TACTCTCCAG ATTGCAGCTT      2760

TTCGCCTACC CACTACACTT GACAAAGAGC CACTCTTTAT TCCATGGTAT CAAAGGCAAG      2820

ACTTGGTTTG GCATTGAGGT CCCAGCCTGC GAAGTTTTCT TTGTTCCACT CGCTGACGCT      2880

GGCATAGGCA ATCATACCTG CATTGTCTCC GCAGAGTCGC AGAGGGGGGA TGATAACCTT      2940

GACATCTGTG ATTTCGGCTG CTAGGCGTTC TCTGAGACCT TTATTGGCTG CCACACCACC      3000

TGCCACAACT AGGATTTTAA CAGGATATTT CTCCAAAGCC TTCTTGGTTT TTGCCATGAG      3060

AATGTCCATA ACTGCTGCTT GGAAGGAAGC ACACAAATCT TCTGTAGACA GGCTTTCTCC      3120

CTTTTGCTCG GCATTGTGAT GAAGATTGAT AAAGGCAGAT TTCAAACCTG AGAAGGAGAA      3180

CTCCAGATTA TCTTCCTTAA TCATGGCACG GGGGAAATCA TAAATATCCT GCCCCTGATG      3240

AGCCAGCTCG TCAATCTCAC GACCTGCAGG ATAGGTCAAG CCCATGACAC GGCCGACCTT      3300

ATCATAAGCC TCACCAACCG CATCATCACG GGTTTCCCCA ACAATCTTAT AATCTCCTGC      3360

CTCCGAAACA TAAACCAACT CTGTGTGTCC GCCGCTGACC AAGAGGGCTA GCAAGGGAAA      3420

CTCCAAAGGC TCCACACTCT GAGCTGCCAT GAGGTGCCCA GCCATGTGAT TAACAGGAAT      3480

CAGTGGAAGT CCGTGAGCCC AAGCAAAGGC CTTGGCAGCT GACAAACCAA CTAGCAAGGC      3540

TCCGACCAAG CCTGGTCCGT AGGTAACCGC AACAGCTGTC ACGTCCTCTT CGGTAATCCC      3600

TGCTTCTGCC AATGCCTCCT CGATACAGGC TGTAATGACC TCGACATGGT GACGACTGGC      3660

TACTTCGGGC ACTACGCCAC CAAAACGTTT GTGACTCTCA ATTTGACTAG CAATGACATT      3720

GGACAAGAGC TCATCGTCGT TTTTCAAGAC GGCGACACTG GTCTCATCAC AGGATGTCTC      3780

AAATGCTAAA ATATATCTAT CCTTCATCTA TTTCTCTCTT CATGATAATG GCGTCCTCGA      3840

CTGGGTCATG GTAGTAGGCC TTTCGCTCAG CGATAACTGT CATCTTTTCT TTCTTGTAAA      3900

ATGCTTGCGC TCGTTGATTT GACTGTCTGA CTTCGAGGAA AATTTCCTTG TCTGTCGGCA      3960

ATTGAGCAAA CAAGGcTGAC GCAATCCCCT GACCCTGATA AGCTCCTTTG ACAGCGATTT      4020

GCAGGACTTC TGCTTCAAAA AGATTCTCCT GCACAGCTAG AAATCCAATC ACTTCTGCCC      4080

CATCATAAGC CAATGCATAC CAAGTCTGGT CTTGGGACAG ATCTGCTTGG ATTTGCTCCA      4140

GAGTCCAAGG ACTGACTAGG TAAACAGCTG CCATAACAGC GTAGATGGCT TGAGCTAGGT      4200

CAGGCTGTTG TTGAATTCGC TTGATTTCTA TCATAGGCGT TTAATGTAAG ACTCGCCAGA      4260

CTCGGTATGG TTCTTGAGCC AGTTTTCCTC AGCCTCGACT CGTTTGAGGT AATTCGGCAC      4320

AAAATCATGC AAGGAGTCTG CTTCCTTGTC CCAGGCCAAA AGAGCTAGAT TAGCTGCATT      4380
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1216

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GGGCAATGTT TCTTTGTAAT CAGTCCTTGG CAAGTGTTTT TGAATCTGCT CAACAAAGGG   4440

GCCAACTTCT CCGACAAAGG TTACCTGACT AGTACCCTTG ACTTTTTCTA GCACCTCTTC   4500

AAAAGATAGG TGCGCTTCTG CCATGACAGG TTTGGCATTT TCATAAAATC CTGCATAAAC   4560

ATTATTGCGA CGCGCATCCA TCAAGGGGAC AAACAAACCT TCTTGTTGAT GGGGCACCAG   4620

AGCCAAGAGA CTCGACATAC CAACCAACTC GATGTTCAGG GTGTGAGCTA AGGTCTTAGC   4680

AGTTGCTACC GCAATTCGCA AGCCTGTATA GCTACCCGGC CCTTCAGCTA CCACGATTCG   4740

GTCCAAATCC TTGGGTGTCC AATCCAAACT TGCCATCAAA AAATCGATGG CAGGCATAAG   4800

AGTAATACTG TGATTTTTCT TAATATTAAT CGTCGTCTCG GCAAGAACCT GCTTATCCTC   4860

TAAAATAGCC AGAGAAAGAG CCTTGCTGGA CGTATCAAAA GCTAATACTT TCATAACACA   4920

TTCCTATCTT TTTGTCTGCT TACTATTATA CTACAAAAGC TGGCACATGG GAATTTTCTT   4980

TGCCCCCAGA CAAGAGTGCC CTCACTTAAC TAAAAATAAT TTAAAAAAAT GCTCACTTTT   5040

CCTTTTCTTT TCCGAATATA AAAGTGAACA AGAAAAAAGG AGGAAAGTTC AATGACAAAT   5100

TTTGACATTC TTGACAATCA ATTTTTATCC TTATCTGAAA ATGAATTATC AGATATTGAT   5160

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GGAACAGCAC TTATAGGTTC TGGTTTGGCA GCTGGTTATT TTTTAGGAGG AGATTAATAT   5280

GATGAAAGAT TTGAACAATT ATCGTGAAAT TTCTAATAAG GAATTGCAAG AAATCAAGGG   5340

TGGCTTTGGT GTCGGTGTTG GTATCGCTTT ATTTATGGCA GGTTATACCA TTGGAAAAGA   5400

CCTTCGTAAA AAGTTTGGTA AGTCATGCTA GATAAGAAAC ACATTTTTAG AAGGATAAAT   5460

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AATAGAAGAT TCCCCGCATA AACGCAAGCA ACAAAAACAA TAAAAGCTAC CAAGCGAGCT   5940

CCGATAGCAA AAGCAAATAA GTTATACATA GGGCAACCTC CTTGACTTAA AATCTATATG   6000

GAATTATGAC AAGCAATAAA TTTCACTTCC GTTATCAACA TAATACATTT TCTTTATTTT   6060

TGAAACGCT TACCAAAGAA ATCGTCCCCT AACTTTCTCG TTTCCGTCTT TTACTAATTT   6120

TTCATTTTGT GGTATAATTG AAATAATTGT AACGAATCAA GGTCAATCTA GACACAAAAT   6180
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1217

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GGAATGAAAT CAAGCAAATA TCTGCTAAAA GTTTGGAATA AGCTGACCTG TAAATAGAAA    6240

GGAACTATAT GATTTACAAA GTTTTTTATC AAGAAACAAA AGAACGTAGC CCACGCCGTG    6300

AAACAACACG CACGCTTTAC CTAGACATCG ATGCCAGCTC AGAACTTGAG GGCCGTATCA    6360

CTGCTCGCCA ACTTGTCGAA GAAAATCGCC CAGAGTACAA TATCGAGTAT ATCGAACTCT    6420

TGTCTGACAA ATTGCTCGAT TACGAAAAAG AAACTGGCGC CTTCGAAATT ACGGAGTTCT    6480

AATATGGCCT ACACTCTTAA ACCTGAAGAA GTCGGCGTTT TTGCCATCGG TGGTCTAGGA    6540

GAAATCGGGA AAAACACTTA CGGAATTGAA TACCAAGACG AGATTATCAT CGTCGATGCT    6600

GGGATTAAAT TCCCAGAAGA TGACTTGCTT GGTATCGACT ATGTCATTCC TGACTACTCT    6660

TACATCGTGG ACAATATCGA CCGCGTCAAG GCTGTTTTAA TCACACACGG ACACGAGGAC    6720

CACATTGGTG GGATTCCGTT CCTACTCAAG CAAGCAAATG TCCCTATTTA TGCTGGACCG    6780

CTTGCCTTGG CTTTGATCCG TGGGAAACTC GAAGAACACG GCCTCTTGCG CAACGCCAAA    6840

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CATCGTATGG CTGCGCTTGG TGAAGAAGGC GTGCTCTGTC TCCTGTCTGA CTCGACAAAT    7080

GCGGAAGTAC CAACCTTTAC CAACTCTGAA AAAGTCGTTG GTCAGTCCAT TATGAAGATT    7140

ATCCAAGGTA TTGAAGGACG TATCATCTTT GCATCCTTTG CCTCAAATAT CTTCCGTCTC    7200

CAGCAGGCAA CAGAAGCTGC TGTTAAGACT GGACGCAAGA TTGCGGTCTT TGGTCGTTCT    7260

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GTACAATTAC AACCAGGTGA TACCGTTATC TTCTCTTCTA GTCCCATCCC TGGAAACACT    7500

ACTAGTGTCA ACAAGCTGAT TAACATCATT TCTGAAGCTG GTGTCGAAGT TATCCACGGT    7560

AAAGTGAACA ATATCCATAC ATCTGGACAC GGTGGTCAGC AAGAGCAAAA ACTCATGCTC    7620

TGCTTGATTA AGCCAAAATA CTTCATGCCT GTCCACGGTG AATACCGCAT GCAAAAAGTC    7680

CACGCTGGAC TAGCAGTGGA TACTGGTGTT GAGAAGGACA ATATCTTTAT CATGAGCAAT    7740

GGCGATGTGC TTGCCCTTAC TGCTGACTCA GCTCGTATCG CAGGTCATTT CAACGCCCAA    7800

GATATCTATG TCGATGGAAA TCGTATCGGT GAAATTGGCG CAGCTGTCCT CAAAGATCGT    7860

CGCGATCTAT CTGAAGACGG TGTCGTTCTG GCAGTTGCAA CTGTTGACTT CAAATCGCAG    7920
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                              1218
ATGATTCTAT CTGGTCCAGA CATCCTCAGC CGAGGCTTTG TCTACATGAG AGAGTCTGGC    7980

GACTTGATTC GCCAAAGCCA GCGTATCCTC TTCAATGCCA TTCGTATCGC ACTGAAAAAT    8040

AAGGATGCTA GCGTGCAATC TGTCAATGGT GCCATTGTCA ACGCTATTCG CCCCTTCCTC    8100

TATGAAAATA CCGAACGTGA ACCGATCATC ATCCCGATGA TCCTCACACC AGATGAAGAA    8160

TAAAGCAAGA AAACAGCCCC GTCCTCGGAG CTGTTTTTCT CTATGCTTTC TTTTGAGATT    8220

AAAACTCATA CTCAATGAAA ATCAAAGAGC AAACTAGGAA GCTAGCCGTA GGTTGCTCAA    8280

AGCACTGCTT TGAGGTTGTA GATAGAACTG ACGAAGTCAG TAGCCATACC TACGGCAAGG    8340

CGACGTTGAC GCGGTTTGAA GAGATTTTCG AAGAGTATCA ATAAAAATCG AAATCAGACT    8400

AGAAGGCTAA GCGAAAGCAT AACTTGAGTT AGCTCCCATA GTTCGGGAAA CTATGGGAGG    8460

CTGGAGATGA ATCAAAGCCA AGCTTTGAAC TCATTCGTAA GAAGCCGACG ACGTATCATT    8520

TTGATTTTTG AAGAGTTTTA GAAATACTAC GATTTTTACC TTCCAGATAC ACCATCAAAA    8580

TAGAAATATC TGCTGGGTTT ACTCCCGAAA TACGGCTGGC TTGGCCGATG GTTTCTGGAT    8640

TGATGAGTTT GAACTTCTGA CGGGCTTCGG TTGCGATAGA ATCAATGTCA TCCCAGTCGA    8700

TATTGGCCGG AATGCGTTTT TCTTCCATGC GTTTCATCTT GGCAACCTGG TCCATGGCTT    8760

TGGAAATATA GCCTTCATAC TTGATTTCTG TTTCAATCAA TTCGATAATC TTGTCATCCA    8820

AGTCTTCTGC AGCTGGTCCG ATGAAGGCCA CCACATCTTG GTAAGAAACT TCTGGACGGC    8880

GAAGGAATTC CTTGGCTGTC ACTGCATCGG TCAAGGGTTT GAAGCCCATC TCCTCAACCT    8940

TGGCATTGGT TTCCTTGACT GGCTTGAGTT TGATACTGTC TAGGCGCTTC ATCTCATTAT    9000

CAAATTGATT TTTCTTGATT TCAAAACGAG CCCAGCGTTC ATCGTCCACA AGGCCAATCT    9060

CGCGTCCCAT CTCAGTCAAG CGCATATCAG CATTGTCATG ACGAAGAATG AGACGGTATT    9120

CAGCACGACT GGTCAAGAGA CGGTAGGGTT CAATGGTTCC CTTGGTCACC AAGTCGTCGA    9180

TCATCACCCC GATATAACCA TCACTGCGCT TCAAAATCAA TTCAGGCTTG CCTTGGATTT    9240

TCAGAGCCGC ATTGATACCC GCGATAATCC CTTGGCCTGC TGCCTCTTCG TAACCTGATG    9300

TTCCATTTGT CTGACCAGCA GTGAAGAGAC CTGAGATTTT CTTGGTTTCC AAAGTCGCAC    9360

GCAACTGATG AGGCAAGACC ATATCATACT CAATAGCATA ACCTGTCCGC ATCATCTCTG    9420

CATTTTCCAA ACCTTTGATG GAATGCACCA AGTCACGCTG GACATCCTCA GGCAGACTGG    9480

TTGAAAGTCC TTGCACATAG ACTTCCTCAG TATTGCGCCC TTCTGGCTCA AGGAAGAGTT    9540

GGTGACGTTC CTTGTCCGCA AAGCGCACAA TCTTGTCTTC AATCGACGGA CAGTAACGAG    9600

GCCCCACTCC CTTGACCACA CCTGTAAACA TAGGCGCACG GTGGAGGTTG TTTTGGATAA    9660

TCTCATGACT GGTACCATTG GTATAGGTCA ACCAGCATGG TACTTGGTCC TTGACATAAT    9720
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1219

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CCTCATCACG TGAAGTGTAT GAGAAATGAT TAGGCACTTC GTCTCCTGGC TGAATTTCTG      9780

TCACATCGTA ATTGATAGAA GAAGCCTTGA CACGTGGAGG GGTTCCTGTC TTGAAACGAC      9840

CGATTTCGAG ACCCAGTTCC TTGAGATTGT CAGCTAGGTT AATAGAAGCC AAGCTGTGGT      9900

TAGGACCTGA TGAGTACTTG AGGTCTCCGA TGATAATTTC CCCACGGAGA GCAGTCCCTG      9960

TCGTCACAAT AACAGCCTTA GCAGCATATT CTTGATGGGT GGCTGTACGC ACACCGACAA      10020

CCTTGCCATC TTCCACCAAA ATCTCATCAA TCATGGTTTG ACGAAGGGTC AGATTTTCTT      10080

GGTTTTCAAC CGTCTTGCGC ATCTCCTTAG AGTAAAGTTC CTTGTCAGCC TGCGCACGAA      10140

GGGCACGGAC AGCTGGCCCC TTCCCTGTGT TTAGCATCTT CATCTGGATG TAAGTCTTGT      10200

CAATGGTTTT GGCCATCTCG CCACCGAGGG CATCGACTTC ACGCACGACA ATCCCCTTGG      10260

CAGAACCACC GATAGAGGGA TTACAAGGCA TGAAAGCCAG CATTTCAATA TTGATGGTCG      10320

CAAGCAGGAC CTTACAGCCC ATACGGCTAG CGGCCAAGGA AGCCTCAACC CCAGCGTGTC      10380

CCGCACCAAT TACAATAATA TCGTATTCTT CAGTAAAATG ATAAGTCATG TTTCTCTCCT      10440

ATTCCTCAAG ATGAATGTGT CTTAGTTGGC CTTCCCAATC TGGTAGGGCT GTTTTTAAAA      10500

AGACTGGAAC TAGCTGGATA TTCTGGAGCT TATCCAAGTC AATCCACTCA CAGGGCTGCC      10560

TTTTCTCATC TTCCTGCATG GTCAACGGGG CATCTTCAAG CAAATCCACC AGATAATGAA      10620

ACTCGATATT GTGATAGGAA ACGCCGTCCA CTTCAAAACG ATTTTCAACC ACAAAAGCTA      10680

GCTGCCCAGC TTGAGCTTTG ACACCCAGTT CTTCCTTCAC TTCACGGACT ACCGCGTCTT      10740

CCGTGCTTTC ATTGACTTGA ATCGCACCTC CAATAGTGTA ATACTTGCCC TTGTCTTTGG      10800

TAACTAGAAG CTTGTGATTT TGGACAATCA AGGCTGTAGC CCGAACACCA AAAACCGTAT      10860

TGTCTACTTT TGTCCGAAAG TCTTGTTGAG TCATTCTTGT CCTTTCCCTT AAACGACACA      10920

AAAACAGTCA AAACTACAAA GAAGTGCAGG ACAAAAAAGC CTGCAACATC CAGG           10974
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(2) INFORMATION FOR SEQ ID NO: 215:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 987 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 215:

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CCCGTTATGA TTATGGATAG CGCTTTCAAA TTTTTAAACT CCTATCCCAT CCTTTTATCT       60

ATATAATAAG TGAAAATATA ATAACTGTCA AGTAACTGAA GTGAATTTTA TAAAAAAATT      120
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1220
ACAAGCCAAA TTTGTAAAGT TTACACTAAG CCGCTAGgCA ATCGTCTATC AGAATATCCG   180

TTTATTTGTC AATAATCCGA GAAAATCTTG CAACGCTTAG AAGTCTATAA AAACTATCAA   240

CATTTATATG ACTTGCGAAT AGCAATCCTG CTAAACCTTT CCACACTCTA TCTATACAAT   300

CAAGATAAAA ACATGTGTAA GCAAATCTGC TACACTTTAC TGGAGGACGC CAAGAATAAG   360

AAAAGCTACG ATAGGCTTGC TATCTGCTAT GTCCGTATTG GGATTTGTAC AGACGATTCT   420

AAACTTATCC AAAAAGGGTT CTCCCTTCTG GAGCTGACCG AGGAAACTTC TATGCTGTCT   480

CATCTCAAAA AAGAAGTAGA GACCCATTAT CAACCAAAGA AATTATAAAA AAAGTCGAGG   540

GAGCTCCTCG ACCTTTTCAT AGAATCGCCG AACGATTTAA CGAGAAAGTA TGACTTTTAC   600

GTTTATCCCA ACTCAATTAT GACATTTTTT TCAAAAGTCA ATATATCTCA CTTTTTCAAC   660

GACAAGAAAG AGGCTGATAA TCTACCAACC TCTTATTCTG AACCCATCAC TCCATCACTT   720

TTTAGCTTCA TTCGCTTTCT TAGCGACTGC AATCTGGTAT TCGACTTGGT CATTCCCCTT   780

ACCGGTACAA CCATGAGCAA TTGTAGTCGC TCCTATCTGA TGCGCTATTT CAACCAATTT   840

TTTAGAAATC AGAGGGCGGC TCAAGGCAGA TACCAAGAGA TACTTTTGTT CATAATAGGC   900

ATGTGACTGA TGAGCCACTA GCACATAATC TGTAGCAAAT TCGTCCTTAA CATCAATGAC   960

ATAAGATTCT ACTGCCCAAA CCTTAAG   987

(2) INFORMATION FOR SEQ ID NO: 216:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 2651 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 216:

CTGGGTCTTG TTCATAGTAG GTGTGGTtCT TTTTTTCGAG TGTAGCCCAT AGCTTTGAGC   60

GCATAGTGGA TGGTAGTTGG ATGACAGCCA AAGTCAGAAG CTATTTCAGT CAAATAAGCA   120

TCTGGATTGT CAGTAAGATA GTTTTTAAGT CTATCTCTAT CAACTTTTCT TGGTTTTGTT   180

CCTTTTACTT GGTGGTTTAG CTCTCCTGTT TTCTCTTTTA GCTTTAACCA GCCATAAATG   240

GTATTACGTG AGATTTGGAA AACGTGTGAT GCTTCTGTTA TACTACCTAT TCGCTCACAA   300

TAAGAGAGAA CTTTTTTACG AAAATCTATT GAATATGCCA TAAGAAGATT ATACCACATT   360

GTGTACTATT TTTGGTTCAT TTTACTATAT TTTATAAGTT ATAGTGTAGC ATTCCAACTT   420

CAAAGCACTA TAAAGTAAAT TGAAACAAGA ACAATACAAA CAATTCTCGT AAACGGATTG   480

CAACCACAAA AAAGCAAGCA TTCACAAGAA TACTTACCTA TCATGGGAGG AACAACCGTT   540

1221

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CCTCTTTTTT ATTACTAAAA TTCAAAGAAT TCCAATGCTT TTTTCAAGAG CAAATCCGTA      600

TATTCTGGAT CTTCTTGGGC TACTTCTATT TCCCGCTGAA CTTTTTCCAA ATCATCTGTA      660

ATCACTCCAT CTACTCCTAA GTGAAGAGAT TTGCTGATAG CTTCTGAATC ATTGACAGTC      720

CAGACATAAA GTTTCTGATC CGTTGTCCAT AGTTTGCTTA CAAAATATTC ATCCAAGGTT      780

GAGTACTCCA TAGTATATCC TGTCGCTCTT GTTTTAGGAA AGACAGAATT GTAGGGCATG      840

ATGAAATAAA CTGGTAGTTC GGCATCATAC TGTCTTACTT TTTCGACAAC ATGGTAGTCT      900

AAAGACTGGA TTTGATGTCC ATAAATCTTG AGCTTTGCAG CATAACGGGC TAAAAAGCGG      960

TTCATCATGT CTGGACTATC TTTTTTACTG GTTTTAATTT CAATTAGTAA TTTTTGACCA     1020

AGTTCGTTGG CTCGACTGAG ATAATCTTCA AAGCTTGAAA TTTTAGTCTG GTAGCCATTT     1080

TCAAAAATAT CAATCCCTTT AAGCTCCTCC AAGTTTAAGT CTTGAGGACT TTTATTGATA     1140

CCTGCTAGAT TTTTCAAGTT AGCATCATGC ATCATGACAA ACTGCCCATC TTTTGTTTCC     1200

TGCACGTCCG TCTCCACCAA GTCTGGTTTG AGTTGTGCTG TAGTTTCCAA GGACTCTACT     1260

GTATTTTGAA TCCCATTTGC ATTGGAAACC CCTCGGTGAG AAATAAGTTG AGGTAGATGA     1320

ACCATGGGAG CCTCCAGATA AATATAACCT TCTAAGGCAA AGAAAAGACT GGCACAAGTC     1380

ATGACACCCC ATCGCACGAT GTGATCTTTT TCTCTCCTAG GAAGCATATC CAGCTCCTTT     1440

CCTGTCAAAA ATGAAACAAA TTTAACCAAA AAATAAGTCA GAGCCATATA ATACAGATTT     1500

TTAATCACGA CAAAATTCAA AATACCAAGA ATCAGAGACT CTCTCTGAGT GATATCATCT     1560

ACCAAAGTTT GAGCCAATAA TAAAGGAATC AAAGGAAGAT ArAATAATAA ATGTGCTTTG     1620

AGCAAGATGT AAAATAAATT CCAAGCATAA AAAGTAACTC TCTTCTTGGT TTTCTCCAAG     1680

CTAAACATCA CTGCTTCTCG AACAGTCAGC TGATCATATA CAATCTTCGG AAGGGCAAAC     1740

ATCAATCTGA CAGAGACATA GAGAAAGATA AGAGATAGAA GTAGGATGCT CAGCCACCAC     1800

ATCCAATATC TATCTTCTAA ATAAGCTTGG ATAAACTCTG GAATGACGAT TTTATTAAGA     1860

TAATAAATCT TCAGCATTTT CCGTATAAAA GGAAACAGCA TAGCTATATA GAAAAAGATA     1920

AACAAGGCTT TAGCGCAAGT TAGCTTTTTC ATAAATCCAA AACTTTCATG GAAAACCTTG     1980

CGGATATACT CAATTAGCCT TCGCTTTTCA TTATAGAGGA GATGACGAGC ACCAATAAAG     2040

AGGAGTCCTA TTTGAAAATA AGCAACCAGA AGGTTAATTA CAATCAAGGC TAAAAAAGCT     2100

AGACTAATCA ATGGAGAATG AGTAAGGATG GCTAAGACAT TGTTATAGGA AATAAAAAGA     2160

TAACCTGTCT GATCTAATAA GAAGCTAGCC AACCATGAAT TGAATGGTAC CCACAAATAC     2220

TCCACTATCA TAAAAATCAA GAAAAATAGA AAGAGGATTT TATCAAGATC GAGGTAAATC     2280
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1222

TGTTTAAGAC CCAATTTTTT AGGTTTTTCA GGTTTCATAG GCACTCCTAG TCAAATAATT   2340

GAGACAAGTC CAAGCCACCA AAAGGATTGT TTGATAAGCT ACTTTCTGTC TCTAACAATT   2400

CCCTAGCTTG ATCCGACTCT AAGAAGGATT CGTAAACACG CGCCGTCATC CGAGCATCCT   2460

CTAAACTATT ATGAGACTGA CCTTGAAATC CAAGAAATGA GGCAACAGTT TGCAATTTGA   2520

GATTGGCAAT ACCATGTAAA TCTGAACTCC GACGTTCAAA AGCTTCATCA TACAAATCCA   2580

CCTTGTACTG TTGGCTATAG TCTAAACCAT GCTCTGCTAA AATAGGTAAA TCACTTTTAG   2640

CAGCATTGTA G   2651

(2) INFORMATION FOR SEQ ID NO: 217:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 5638 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 217:

CGTTATAATA AACTTGTGAA AAAATTAACA AAGGATATCG TTCCTTGAAA GCTATGGAGG   60

AAAATATGGC TGATAAAAAA ACTGTGACAC CAGAGGAAAA GAAACTCGTT GCTGAAAAAC   120

ACGTAGATGA GTTGGTTCAA AAAGCTCTAG TTGCCCTTGA AGAAATGCGT AAATTGGATC   180

AAGAACAAGT TGACTACATC GTTGCCAAAG CATCAGTAGC AGCTTTGGAT GCCCACGGAG   240

AATTGGCTTT ACATGCCTTT GAAGAAACAG GACGTGGTGT ATTTGAAGAC AAAGCAACTA   300

AGAACTTGTT TGCCTGTGAA CACGTAGTAA ACAACATGCG CCACACTAAG ACAGTTGGCG   360

TTATCGAAGA AGACGATGTA ACAGGATTGA CTCTTATTGC TGAACCAGTT GGTGTTGTTT   420

GTGGTATTAC TCCAACAACA AACCCAACAT CAACAGCAAT CTTCAAATCA TTGATTTCAT   480

TGAAGACACG TAACCCAATC GTCTTTGCCT TCCATCCATC AGCACAAGAA TCATCTGCTC   540

ATGCAGCTCG TATCGTCCGC GATGCAGCTA TCGCAGCTGG TGCTCCTGAA AACTGTGTGC   600

AATGGATTAC TCAACCATCT ATGGAAGCAA CAAGTGCCCT TATGAACCAC GAAGGTGTTG   660

CGACAATCCT TGCAACAGGT GGTAATGCCA TGGTTAAGGC GGCTTATTCA TGTGGTAAAC   720

CAGCTCTTGG GGTAGGTGCC GGAAACGTTC CAGCTTATGT TGAAAAATCA GCAAACATTC   780

GTCAAGCAGC ACACGATATC GTCATGTCTA AATCATTTGA TAACGGTATG GTCTGTGCAT   840

CTGAACAAGC AGTTATCATT GATAAAGAAA TTTACGATGA ATTTGTAGCA GAGTTCAAAT   900

CTTACCACAC TTACTTTGTA AACAAAAAAG AAAAAGCTCT TCTTGAAGAG TTCTGCTTCG   960

GCGTCAAAGC AAACAGCAAA AACTGTGCTG GTGCAAAATT GAACGCTGAC ATCGTTGGTA   1020

1223

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AACCAGCAAC TTGGATTGCA GAACAAGCAG GATTTACAGT TCCAGAAGGA ACAAACATTC    1080

TTGCTGCAGA ATGTAAAGAA GTTGGCGAAA ATGAGCCATT GACTCGTGAA AAATTGTCAC    1140

CAGTTATTGC AGTTTTGAAA TCTGAAAGCC GTGAAGATGG TATTACTAAG GCTCGTCAAA    1200

TGGTTGAATT TAACGGTCTT GGACACTCAG CAGCTATCCA CACAGCTGAC GAAGAATTGA    1260

CTAAAGAATT TGGTAAAGCT GTTAAAGCTA TTCGTGTTAT CTGTAACTCA CCTTCTACTT    1320

TTGGTGGTAT CGGGGACGTT TACAATGCCT TCTTGCCATC ATTGACACTT GGATGTGGTT    1380

CTTACGGACG CAACTCAGTT GGGGATAACG TTAGTGCCAT TAACCTCTTG AATATCAAAA    1440

AAGTCGGAAG ACGGAGAAAT AACATGCAAT GGATGAAACT TCCTTCAAAA ACATACTTTG    1500

AACGTGATTC AATTCAATAC CTTCAAAAAT GTCGTGACGT TGAACGTGTC ATGATCGTTA    1560

CTGACCATGC CATGGTAGAG CTTGGTTTCC TTGATCGTAT CATCGAACAA CTGGACCTTC    1620

GTCGCAATAA GGTTGTTTAC CAAATCTTTG CGGATGTAGA ACCGGATCCA GATATCACAA    1680

CTGTAAACCG TGGTACTGAG ATTATGCGTG CCTTCAAACC AGATACCATC ATCGCACTCG    1740

GTGGTGGGTC TCCAATGGAT GCTGCCAAAG TAATGTGGCT CTTCTACGAG CAACCAGAAG    1800

TGGACTTCCG TGACCTTGTC CAAAAATTCA TGGATATCCG TAAACGTGCC TTCAAGTTCC    1860

CATTGCTTGG TAAGAAGACT AAATTCATCG CGATTCCAAC TACATCTGGT ACAGGATCTG    1920

AAGTAACACC ATTTGCCGTT ATCTCTGATA AAGCAAACAA CCGTAAATAC CCAATCGCTG    1980

ACTACTCATT GACACCAACT GTGGCAATCG TAGATCCTGC TTTGGTATTG ACAGTTCCAG    2040

GATTTGTTGC TGCTGATACT GGTATGGACG TATTGACTCA CGCGACAGAA GCATACGTAT    2100

CACAAATGGC TAGTGACTAC ACTGATGGTT TAGCACTTCA AGCCATTAAA TTGGTCTTTG    2160

AAAATCTCGA AAGCTCAGTT AAGAATGCAG ACTTCCACTC ACGTGAGAAA ATGCATAACG    2220

CTTCAACAAT CGCTGGTATG GCCTTTGCCA ATGCCTTCCT AGGTATTTCT CACTCAATGG    2280

CCCATAAGAT TGGTGCGCAA TTCCACACAA TCCACGGTCG TACAAATGCT ATCTTGCTTC    2340

CATACGTTAT CCGTTACAAC GGTACACGTC CAGCTAAGAC AGCAACATGG CCTAAGTACA    2400

ACTACTACCG TGCAGATGAA AAATACCAAG ATATCGCACG CATGCTTGGA CTTCCAGCTT    2460

CTACTCCAGA AGAAGGGGTT GAATCTTACG CAAAAGCTGT CTACGAACTC GGTGAACGTA    2520

TTGGGATCCA AATGAATTTT AGAGACCAAG GAATTGACGA AAAAGAATGG AAAGAACATT    2580

CTCGTAAATT AGCCTTCCTG GCTTATGAAG ACCAATGTTC ACCAGCTAAC CCACGTCTTC    2640

CAATGGTAGA CCATATGCAA GAAATCATCG AAGATGCATA CTATGGCTAC AAAGAAAGAC    2700

CAGGACGCCG TAAATAATTG TTTATCAGTC TAGAAGCAAG ACAAAAACTC AATTTGAGGG    2760
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                                    1224
AAAGATCCAG TAATTTTTCT ATGATAAAAG GCATCCTATC AAGGTTTTTG AACACCTGAT      2820

AGGATGCCTT TTTATGATAT TGAGGCCTTT TTGCCCTTTT TGAAAAACTA GAATAGAAAC      2880

AAAATATATA ATAGATTGAA ACTAGAATAG TACATATCTG CTTCTAAAAC ATTGTTAGAA      2940

TTCGATTTGA CTGTCCTGAT CGATTTGTCC TGTTCTTATT TCATTTTGAT ATATAAAAAA      3000

TATAGTATAG TAGACTGAAT CTAAAATAGT ACGAAACAAT TGCTAAAACA TTTATAGAAA      3060

TTAATTTTAC TTTTCTGATA GAGTTGTTCA CATCTTATTT CAATTCACTA TAGTTTAATT      3120

TAAGAGTAGT ATTTACTAAG GCCCAATTAA AATCAAAGAG CAAACTAGAA AACGAGTGCC      3180

ATTCAGCTCA AAACACTGAT TTGAGATTGC AGATAAGACT AGCCCCCTCA TTAACAGATT      3240

TACGATAAAA CGATGACAAG GTGTGTTGCT TTTTGATTTC TAAAGAGTAT AATGATAGAT      3300

CTCTATAAAA TAAGTGCGAA GGAAATGAGC TTTTATAGTC CTTTCGTTTT AAAATACTAT      3360

CTCAGATATT CTTATATCGA CAAGAAGTTT TTGAGTCATT CCCTCATCAT ACATATTAAA      3420

TAAATAGTGG CTCATTCAAT TTTTCACTAG AATAATAAGC TAGTATAGTA AACTGAAATA      3480

AGATATAAAC AAATAAATTG GAGCTTAACA TCCATTTCCA GCAATTTTTT AGAAACTACA      3540

GTGGACTATT CTAGATTCAA CATATTATAA AAACTAGAGT AAAAGAAAAG GATTGGATCT      3600

TGTGTAATGC AGGATCCAAT CCTTTCAATC ATTTTGTCCA ACTTTTGGAG GTTCCTACAA      3660

TGTAGTCGTC ATTAATAAAG ACAGATGGGA ATGACAGTGT TCCTATTTAT TTTGATAGAG      3720

ATCGATGAAT TCTTTAGATA GCAACTGAAT AATCTCTGTT GAAGCCATTT GGTCTTCTGC      3780

ATGCATAAAT AGCAAGGAGA ATCCTATTTT TTCTCCAGTA GCTTCTTTTT GTATGAGATT      3840

AGAGTGAATC TTGTGCGCTT CTACTAAGGA GTCTTCCGCT TCTTCAACTT TAATTTTCGC      3900

TTCTTTTAAA TTTCCTGCCT TAGCTAGTTG GATGGCTTCA ATAAAGGATG ATTTGGCTGC      3960

TCCACTATTG GCAATGAGCT GAAAACAGAT ATATTCCATT TCTTCTGTCA TCTTATTTCT      4020

CCTATCCATG CAAGTGCTTG TTCCAGAACT TTTGCTCCAT TCATCATTCC GTAATCCCGC      4080

ATATCAATGG TATCTACAGG GATATTTCCT GCAATTTCTT TCACAGCAAG TAACTCATAA      4140

CGAATTTGTG GCCCAATTAG AATGACATCT GCTTCATGGA TATTCTTTTT AGCTTCTGTC      4200

ATTGATTTTG CTTGGATAGA GATTTCAATC CCACGTTCAG TCGCACTTTG TTGCATTTTT      4260

TTAACAAGCA TACTTGTCGA CATTCCCGCA TTACATACTA ATAAAATTTG TTTCATAATC      4320

TTAACCTTCC ATTTCTTGTT CAACAACTTT GTCATTAACT TTGATAAATG GAATGTATAG      4380

AAGAACTCCA AGTGCAAAGA TGATGAATTG AACTAGAACT GCTCTCACGT CCCCTGCTGT      4440

TGCTAACCAT GCATTTAAGA ATACTGGTGT AGTCCAAGGA ACTTGTATAA ATGCAGGACT      4500

CATGAATTCT GTAACTGTTG CTAAGTAGCT GATTAAAATA CCAAGGACTG GAACTGTGAT      4560
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1225

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AAATGGAATA GCTAATGAAA TGTTATAAAC GATTGGGTAA CCGAATAATA CTGGTTCATT      4620

GATATTGAAG ATACCAGGTC CAAAAGATAA TTTAGCCACG TTTTTAGAGA CAGCATTGCG      4680

ACTCACTAAG AATGTTGCTA TTAATAAACA TAATGTAGAT CCACTACCAC CCATTAAAGC      4740

GAATGTTTGT ATTTGTGATA GGTTGATGAT GTGTGGAATG GCTTGTCCAT TATTTGCTGC      4800

AGTGATGTTT TCAGTAATGT TAATTAATAG TAATGGTTCT AGGATGGCAC TGTAAATAAC      4860

TGCTTGGTGA ATACCAAATA GCCATAACAT ATTTCCTAAA GAGTAAATAA TAATGACCCC      4920

GATTAAGCTT GTACCAATAT GACGAATTGG TTCTTGAATA AAGATTGTAA TGATTGAGAT      4980

TAAGTTCATT CCAGTTATAT TGAATAATAA TGCTGAAACA ACCCCAAATA AGGAGATGAC      5040

GGTCATGACT GGAAGTAATA CGCTAAATGA TCTACTAACA GCTGGTGGAA TATTTTCACC      5100

AAGGTTCATT TGTAAAGCTT TAACGTTTGA TAATTCAATG AATAATTCTG TTGCAATAAT      5160

CGtACGATAA CCCCGGCGAA CATTGCGCCT GTACCTGTGT TGTTGAATGA AAGAACACCT      5220

GAAATGTTTA CCGCATCTTT TGCTCCGTCA GGAACTACAG AAACTGTATT TGGCATCATC      5280

ACAATTAAAG AAACTAATGA TAGCATTGAT GCTGCTAACG GGTTTTCGAA ATCTCTGTTT      5340

TTAGCTAAGA AATAACCAAC CATTACAGCA ATAATCATAC CTGAAATACT TAAAGTACCG      5400

TTTGCAATTG TTATTCCCCA ATATTGGAAT CTTGTTAATG TATCCCCTTG GAAAATCCAC      5460

TTAAATACCG TGTTGTTCAA AAGAACGATT AAACCTGCCA AAATATATAA TGGCATTACT      5520

GTTACGAATG CATCTCTTAG GGTTTTTAAA TGAATTTGGT TCCCTAGTTT ACCAGCAAAG      5580

GATGGCAAAA AAATTTTTTT GGGGGGGGGG GTTATTAAAC CCCCCTTTTT AAAAAAAA       5638
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(2) INFORMATION FOR SEQ ID NO: 218:

  (i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 4745 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

  (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 218:

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CCGGAAGCTG TTGCCCTTGG AACTCCAAAT GAAGAAACAG CCTTTGTCTT GAACTATTTT        60

GGTGTGGAAG CACCACGTGT TATCACTTCT GCCAAAGCAG AGGGGGCAGA GCAAGTTATC       120

TTGACTGACC ACAATGAATT CCAACAATCT GTATCAGATA TCGCTGAAGT AGAAGTTTAC       180

GGTGTTGTAG ACCACCACCG TGTGGCTAAC TTTGAAACTG CAAGCCCACT TTACATGCGT       240

TTGGAGCCAG TTGGATCAGC GTCTTCAATC GTTTACCGTA TGTTCAAAGA ACATGGTGTA       300
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                                1226
GCTGTGCCTA AAGAGATTGC AGGTTTGATG CTTTCAGGTT TGATTTCAGA TACCCTTCTT      360

TTGAAATCAC CAACAACACA CCCAACAGAT AAAATCATTG CTCCTGAATT GGCTGAATTG      420

GCTGGTGTGA ACTTGGAAGA ATATGGTTTG GCAATGTTGA AAGCTGGTAC CAACTTGGCT      480

AGCAAATCTG CTGAAGAATT GATTGATATC GATGCTAAGA CTTTTGAACT CAACGGAAAT      540

AATGTCCGTG TTGCCCAAGT GAACACAGTT GACATCGCTG AAGTTTTGGA ACGCCAAGCA      600

GAAATTGAAG CTGCAATGCA AGCTGCCAAC GAATCAAACG GCTACTCTGA CTTTGTCTTG      660

ATGATTACAG ATATCGTCAA CTCAAACTCA GAAATCTTGG CTCTTGGTGC CAATATGGAC      720

AAGGTCGAAG CGGCTTTCAA CTTCAAACTT GAAAACAATC ATGCCTTCCT TGCTGGTGCC      780

GTTTCACGTA AGAAACAAGT GGTACCTCAA TTGACTGAAA GCTTTAATGC GTAAGATTTT      840

GGGTGTCAGC TCAAAATCGG AAAGTCTAGT TTGCCTTATA TCGCAAGGAG TTTCGGCTCC      900

TTTTTTCTAG GAGTGAAGTA TGTTAGAAAA TGGCGATTTG ATTTTTGTGA GAGATGGGTC      960

AGACATGGGA CAGGCCATCC AGACTTCCAC AGGTAACTAT AGCCATGTTG CCATTTATTT     1020

GGATGGGATG ATTTATCATG CTAGTGGACA GGCTGGTGTT GTCTGTCAAG AACCGGCAGA     1080

CTTCTTTGAG TCCAATCATT TATACGACCT CTATGTTTAC CCAGAAATGG ATATCCAGTC     1140

GGTGAAGGAA AGAGCTTGCA AACATCTTGG AGCACCCTAC AATGCTTCTT TCTATCCAGA     1200

TGCAGCTGGT TTTTACTGCT CCCAGTATAT AGCAGAAATC CTACCTATTT TTGAAACTAT     1260

TCCTATGAAA TTTGGAGWTG GGGAGCAGGA GATTAGTGAT TTTTGGAGGG AGTATTACAT     1320

AGAACTAGGT CTGCCTGTTC CTCTGAACCA AGCTGGTACC AATCCTAGTC AGTTGGCAGC     1380

ATCGCCTCTG TTACAATGTA AAGAAAGGAA TCTTCATGAT TCAGATTTTT AATCCATCTC     1440

GTTTGACGAG ACAGCCATTT TTGGAGAATT GATCCGCTAT CTGGATCAGT ATGAGGATGT     1500

GATTCTACGG GAAATTAAGG CTCAATTTCC AGATGTTGCA GTTGATAAAC TCATGGAAGA     1560

GTATATAAAG GCAGGCTTGA TTCTACGTGA AAATAAGCGC TATTACCTCA ATTTTCCTAC     1620

GCTTGAATCA CTTGATAGTC TTGAACTGGA TCAAGAGATT TTTGTCAGAG AAGCTAGTCC     1680

GGTCTATCAA GCCTTGTTGG AGCAGAGTTT TGAGACGGAA TTGCGCAATC AAATCAATGC     1740

AGCTATTTTA GTTGAAAAGA CGGACTTTGC GCGCATTAAA ATGACCCTGT CCAATTATTT     1800

TTACAAGGTC AAACAGCAGT ATCCTTTGAC AGAAAAACAG CAGGAGCTCT ATGACATTTT     1860

AGGAGATGTT AATCCTGAGT ATGCCCTCAA GTATATGACG GCTTTTTTGT TGAAATTTCT     1920

CAAAAAAGAC CAGCTTATGC AGAAATGCCG TGATATCTTT GTGGACAGTT AGGTTGTCTT     1980

AGGCTATATT GTGCAAAATG AAGATGGAAA GTATGAGTTG CTATCGATT  TTGATAAGGA     2040

GAGGTTAACT TTCTACTTAG CGTGATTTCT TGTTTCTGAG TACATTGTTT GACTTTCCTT     2100
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1227

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AGTATTCGGT ATAAACTATA TGTAACCGGT AACACATATC GGAATAAACT AAAGGAGACA     2160

ATCATATGTC ACTTGAAAAC AAATTGGAAC AAGCAACAGG CGCTGTCAAA GAAGGTTTTG     2220

GTAAAGTTAC TGGAGACAGC AAGACAGAAC TTGAAGGAGC TGTTGAAAAA ACAGTTGCTA     2280

AGGCAAAAGA CGTTGTAGAA GACGCAAAAG GTGCTGTAGA AGGTGCCGTT GAAGGTTTGA     2340

AAAACGTTTT TACTAAAGAA TAGGAAAAAA TCAAGGGTTT CATTTTCCCT TGATTTTTTC     2400

TATTCTTATA AATAATTTTC TGCGACGGCT GTATCTCCTG GGTAGGATTC TTTCTTGCCC     2460

TGGATGATTT GGTAACAATC GGCTCCCTTA CCCGCAATAA TAACTGCATC TAATTCGTGA     2520

TTTGTGATAG CCATTGCCGC CTTGATGGCT TCTTGGCGAT CCGCAATCTT TTCAACAGGA     2580

TGATTGATGT AGCTACTAAT TTCATCTGCA ATGGCCATTG GGTCTTCATA GTTAGGGTCA     2640

TCAGCAGTCA GAAAGACTTG AATCTCAGGG TGTTGATTGA GGAGGAGGCC AAAGTCCTTA     2700

CGACGACTTT CTCCCTTGTT TCCTGTTGAT CCCAGAACCA GAGCAATCTT TCCGGTTTGA     2760

TGAGTTTCAA CCACATTGAT GAGTTTTTTC AGACTATCCC CATTGTGGGC ATAGTCGATG     2820

AAGACCTTGG CTCCATTTTT CTGAGTGAGG ACTTCCATAC GACCAGGAAC GCGGGTTGCA     2880

GCGATGCCTT TTTTGATGTC CTCAAGACTT GCTCCGAGAC GGAGACAAGC AAGTCCAGCA     2940

GCAACTGCAT TTTCTTGGTT GAAGTTGCCA ATGAGTTGAA TATCATAATC TCCAGCGAGT     3000

TTACCCGTAG CTGAAAAGCT AAAGGCTTTC CAATTCTCGA TTTGGTTATC AAATTGGCTA     3060

CCATAGAAAT CATGGTCTTG ATCTTCAACC TGTTCTTTCA AGACTGAGAA GTGGTCCATG     3120

TCACTGTTAA TGATGACTGC TCGGCTCTTT TCCATCAAGA GACGCTTGTG GTAGAAATAG     3180

TCTTCAAAGC TAGGGTGTTC AATCGGGCCG ATATGGTCTG GGCTGATATT TAGGAAAACT     3240

CCCACATCAA AGGTTAGACC ATAGACACGT TTGACCAGAT AGGCTTGACT GGAGACTTCC     3300

ATGATGAGGT GGGTACGGTC ATTTTGCACA GCCTGATTCA TCATGTCAAA GAGGTCAATA     3360

CTCTCAGGGG TTGTCAACGC TGACTTAAAG AAAGTCTCGC CATCAAGAGT TGTGTTCATG     3420

GTCGACAACA TAGCAGGTCT ATGCCCTTGA GATAAGATGT TATAGGCGAA ATAGGCTGCT     3480

GTTGTCTTAC CCTTAGTACC AGTAAAGGCA AGGAGTTTGA GTTTTTCCTG TGGATTACCA     3540

TAGAACTCCA TGGCAATCAA ACTCATGGCT TTCTTTATAT CGTTCACAAT GATGACAGGG     3600

ATACCGACTT CGTAGTCCTT TTCAGCTACA TACCAAGCTA ATCCTTGTGT TATAGCAGAA     3660

AGAAGGTATT CTTTTTTAAA GGCAGCGCCT TTTGCGAAAA AAAGAGTGTC TTCTGTTACT     3720

TTTCGGCTGT CGTAGCTGAT GCTATCAAAA ATAACTTTGC TGTAGTTGTA GTGGTAATGA     3780

CCTTGGTCAA TAATTTCGCG AAAAAGGCCA TCTTTCTTTA AAATATCTAA TACGGTTTCA     3840
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                                   1228
ATCTTAATCA TACTTTCTAT TGTAAACCGA AAGTCGTAAA TTTACAAGTA ACAAGGAAAA      3900

GTTTATAATG GAAGATAAGG AGTTTTTCCT AGTTATCAAA ATTGAATGAG GAATCTATGT      3960

CGCACGAAAA CAATCACCAG CAGGCCCAGA TGTTACGGGG GACTGCTTGG CTAACGGCTA      4020

GTAACTTTAT CAGTCGCCTA CTCGGGGCTG TTTACATTAT CCCTTGGTAC ATCTGGATGG      4080

GGGCTTATGC AGCTAAGGCA AATGGTCTCT TTACCATGGG TTACAATATC TATGCTTGGT      4140

TCTTGTTGGT TTCAACAGCG GGGATTCCAG TTGCGGTGGC CAAGCAAGTT GCCAAGTATA      4200

ATACCATGCG AGAAGAAGAG CATAGCTTTG CCCTGATTCG GAGCTTCTTA GGCTTTATGA      4260

CAGGACTAGG CCTGGTTTTT GCTTTAGTCT TGTATGTCTT TGCTCCTTGG CTAGCAGACT      4320

TGTCTGGCGT GGGCAAAGAC TTGATCCCAA TCATGCAAAG CTTGGCTTGG GGAGTCTTGA      4380

TTTTCCCGTC TATGAGTGTT ATCCGAGGAT TTTTCCAAGG GATGAATAAC CTCAAACCCT      4440

ATGCCATGAG CCAAATTGCT GAGCAGGTCA TTCGTGTTAT CTGGATGCTC CTAGCAACCT      4500

TTATCATTAT GAAGCTCGGT TCAGGAGATT ATCTAGCAGC CGTTACCCAA TCAACCTTTG      4560

CTGCCTTTGT CGGTATGGTA GCCAGTTTTG CAGTCTTGAT TTATTTCCTT GCCCAAGAAG      4620

GTTCACTCAA AAGAATCTTT GAAACAGGAG ATAAGATTAA CAGTAAGCGT CTCTTGGTTG      4680

ATACCATTAA GGAAGCCATT CCTTTTATCC TGACAGGGTC TGCCATCCAG CTCTTCCAGA      4740

TTTTG                                                                 4745
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(2) INFORMATION FOR SEQ ID NO: 219:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1900 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 219:

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CCTGATTGAC CTTATAATAA GGAACAAAAC ACAATGCACT ACCTTTTCAA CAAAAGAGTT       60

GCTGCTTGAT TAAAACCATC ACACCAGTTA TACCATTTTG CTTCATACCC ATCTTGAGCT      120

AGGATACGAT CTTCTAAATC AAAAACAGAG TAAATCTTTC TTTCCTCGCA AGCTTGCGCA      180

TAGAGATGAT ATAGTTCATC ACCACCATCT CTATCCCACT CAGCAGAAAT CGTATCCCGA      240

CCTGCCAATA AAGCCTGATA AGCCCTGTGA TGCCCATCTG TAATCAGCAA ACAATCTCCA      300

AAGGCAAGAA TACTGATTGG ATCGACTTGG ATTGTTTCTG CCGACTGGTA AAGCATCTGA      360

ATATCTTGCA ACTTCTTTTC TGATAAATAT AGTTGAGTCA GATGAAGATC TGCTATATTG      420

ACTTTCATTT CTTTCTCCTC AAGGGAATTC GATACTCACT TCTGTTTGCC TTTAAATCGC      480
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1229

CATTGGAAGC GGAgCTTGTC ATAAAAGGGA AACTCGATAA ACAGGACTCC CAAGCCCACA   540

CAGAGACTGG CAAGGACGTC TGATGGGTAA TGAACTCCCA GATAGACTCT. TGATACCAGC   600

ACACTGACTA GGTAGAGGCC AAGGACGATT TGTACGATTT TTCTCCAGAC CTGATCTTTA   660

ATCCGCTGAC TAAGAATAAC AATCAAAGTC CCTACCATCA GCGTTACAGC TAGAGAATGC   720

CCACTTGGGA AGGAAAATCC CTTCTCCTCC ACCAGATGTA AAATAGCTGG TCGTGGGCGC ,   780

TGGTAGATAT TTTTAAAGGT CACGATTAAA AGACCTGCCA AAGCCAGATT TCCCAGCATG   840

AAGAAACTTT CTATCTTCCA TCGCTTACGA TAAAAGACAA AAGCTGTAAT GACAACCCAA   900

GTGATAATCA CTGGGATATC AATCAGACGT GTGAGGGCTC GAAAAAGAAT AGTCAAATAA   960

TCTGGTAAGT CTCCTCGAAT GGCAGTCTGA ATCGATTGGT CAAAATTGAC CAACATTTCA   1020

GGGTAAAATT TGACCATGTA GCCAAGAATA ACGAAAAGTA AAAGGGCAAA ACTGCCCTTC   1080

ATTAAAAATG TTTGTTTATC TCTCATAATG TTTTAAGGTT GGTTTCAAGA GAACATACAA   1140

CAACCAGAAT GAAACGGAAA AGATAACACC TTCAATCAAG TTAAAAGGTA ATACCATGGT   1200

CATTAGGTAG TTGGAAAGTC CCAAAATTTT TCCAATATCA AAGTTAGCAA ACTTAGCGTA   1260

CAAAGGAACA GCATAAACAT AGTTGAGAAC CAACATGGCC AAGGTTAAAC CAATAGTTCC   1320

AGCTAGAGAG CCTAGTAGGA AACGAAGGGT TGTCCGTTCC TTTTTCCAAA TCAAAGCAAA   1380

TACGATGACA AAAACTCCCA AAGCTACGAT ATTCATCGGC AAACCAATGT AAGTATTCAC   1440

TCCTTGGCTG TTAAGAAGCA ATTTCAAGAG TGAGCGAAGC AAGAGCACTC CTAGAGmCsC   1500

AGGCAAATCC ATGACCACCA GACCCACAAG GACTGGCAAG ATACTAAATT CGATCTTGAG   1560

GAAAGATGCC GCTGGTAAAA GCGGAAAGTC AAAGTACATC AGCACAAATG AGATGGCTGA   1620

TAGAATTGCA ATGGTCGAAA GTCGACGTGT GTTTGTCATA ACAGGTTCCT CCAATTTTCT   1680

ATAAAATCAG AAGAAGTTGG AAAGGATTCC TCTATCTATT CTCACTTTTT ATATCCCAAA   1740

AGTTCCCTCT TACTCTATTA AAGAAAAACA AAGCAAGTGG TTACAATCCG GCTATAAATC   1800

TATCAAAACA GACAAGGCTA TTCTTTCGTC TTCTCCCATC CAGACTATAC TGTCGGTTGT   1860

GGAATCTCAC CACATCACGT TGCGCTCACG GACTTCTTTA   1900

(2) INFORMATION FOR SEQ ID NO: 220:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 4692 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

1230
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 220:

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GGTTTTCCAG CAGGAGCTTC TCCTTTATCA GAATGACCAT CCCATCTGCT CACGATAGAT        60
GAATAATGAT ATTTTTTACC ATGATAGTAA TTTGAAAAAG CCTAACCACC TCCTGAACCT       120
TCTCCATATG TCCATACTCC TCCATCTGGA TATTATACAG CAGCTGATGC AGCTCCCAAT       180
AATGTAAAAC TTGAAATAAG AGCTAGAGCA AGTAATCTAT GTTTTTTCGT TTTCATTTTA       240
TTTTTTCTTT CAAAAAAAGC ACACCTTGAG CAACAATGCA ACAAAATAAA TCCTCCTCTC       300
TCTTTTATTG AAACCGCTTT CTTATGTGAT AAGAATAACT TTTTTATtAT TTGTTGTCAA       360
GGAAAAAATC GAATTTTTTA GATATTTTAC TATATTACCT CTGTGAATAA TATTATATAG       420
TAGTTTTATT TCAAAATAAT ATGCAACCAG TACTAACCAA ATATAAAATA GATGCCATTA       480
ACGAATTTTA TTCAAGTTTT TCCCATTCAT ACTATACAAG TAAAAGAGAT GGTGTTAACT       540
AAAAAGCAAT TCAAACTATT GTAAAATTCC TAGCAAAAAG AGAGCCGAAA CTCTCTTTTT       600
TATCTTCTTT TACTTTTTTT GACTGGCATG AGTGTGATGT CTCTAACACT AAAGTAAGCT       660
AGGATCAACA TGGCTATTGC TAGGAATATT TCTGTTGGTA ATTGAAAAAT TTTCAGAAAA       720
GATAGAACCA ATAAAATCAA GAGTGCCACT AAAATACATA CCATAGCGAC GATATTGACA       780
GTCCCTTTAA TGCTTTCTGG TGTCGCAAAT ACATAGAGTA GGAGCAGTAA AATTCCTAGG       840
ACTAAATAGA CCATCTTTCT CTCTTTCTAG CTCTTATTCA GCTGATTTTT TCTTCTTGTT       900
AGCTTTCTCA CGCTCTGCTT TGTTAAGGAT TTGTTTACGC AAACGGATAG ACTCAGGCGT       960
TACTTCCATG TACTCATCGT CGTTCAAGAA CTCAAGAGAC TCTTCAAGTG TCAAGATACG      1020
AGGCGTCTTG ATAACAGCTG TTTGGTCCTT AGTAGCTGAA CGAACGTTGG TCATTTGTTT      1080
TGCCTTCGTG ATGTTAACTG TCAAGTCATT TTCACGAGAG TTTTCACCGA TGATCATTCC      1140
TTCATAAACC TCAGTACCTG GGTTGACAAA GATCGTACCA CGTTCTTCGA TAGACATGAT      1200
TGAGTAAGTT GTAGCCTTAC CAGCATCGAT AGAAACAAGG GCACCACGGT GACGTCCACC      1260
AATTTCCCCT GGAATCAATG GCAAGTATTG GTCGAAGGTA TGGTTCATGA TACCGTAACC      1320
ACGAGTCATT GATAAGAACT CAGTTGAGTA TCCAATCAAA CCACGCGCTG GAACAAGGAA      1380
GACCAAACGA GTTTGACCAT TACCAGTTGA AATCATATCC AACATTTCAC CTTTACGTTC      1440
AGAAAGGCTT TGGATAACAG ACCCTTGGTA TTCTTCTGGA GTGTCGATTT GTACACGTTC      1500
AAATGGTTCA CATTTAATAC CGTCGATTTC TTTTACGATA ACTTCTGGAC GAGATACTTG      1560
AAGTTCATAG CCCTCACGAC GCATTGTTTC GATAAGGATT GACAAGTGCA ATTCTCCACG      1620
TCCTGAAACA GTCCATTTAT CTGGTGAATC AGTTGGGTCA ACACGAAGGG AAACGTCTGT      1680
TTGCAATTCT GCCTGCAAGC GTTCTTCCAC CTTACGAGAA GTTACCCATT TACCTTCTTT      1740
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1231

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ACCAGCAAAT GGTGAGTTGT TGACCAAGAA AGTCATTTGA AGAGTTGGCT CATCGATGTG    1800

TAGGATTGGA AGAGCTTCTA CTGCATCTGT CGGAGTGATG GTTTCACCGA CAAAGATGTC    1860

TTCCATACCT GAAACGGCAA TCAAGTCACC CGCTTTGGCT TCTTGGATTT CACGACGTTC    1920

CAAACCAAAG AAACCGAAGA GTTTTGTAAC ACGGAAGTTT TTAGTTGTAC CGTCAAGTTT    1980

AGAAAGGGTA ACTTGGTCCC CAACCTTAAC TGTACCACGG AAGACACGAC CGATACCGAT    2040

ACGTCCAACG AAGTCATTGT AGTCCAAAAG TGACACTTGG AACTGCAAAG GCTCATCTGA    2100

GTTATCTACT GGAGCTGGGA TATGGTCGAT AATCGTGTCA AAGATTGGTG CCATAGTCGC    2160

TTCTTGGTCA GCTGGATCAT CTGACAATGA AGAAGTTCCG TTGATCGCTG AAGCATAAAC    2220

CACTGGGAAA TCAAGCTGGT CGTCATCTGC ACCAAGCTCG ATGAAAAGTT CCAAGACTTC    2280

ATCCACTACT TCTGCTGGAC GAGCTGATGG CTTATCGATT TTGTTAACAA CCACGATTGG    2340

GACAAGGTCT TGTTCCAAGG CTTTTTTCAA TACGAAACGA GTTTGTGGCA TGGTTCCTTC    2400

ATAGGCATCT ACGACCAAGA CAACACCGTC AACCATTTTC ATGATACGCT CAACTTCTCC    2460

ACCAAAGTCC GCGTGTCCTG GTGTGTCCAT AATGTTGATA CGAGTTCCGT TGTAAGCAAC    2520

GGCAGTATTT TTAGCAAGGA TGGTAATTCC ACGCTCTTTT TCGATATCGT TTGAGTCCAT    2580

AGCACGCTCT GCCAATTCAG TCCGTGCATC AAGCGTTTCT GATTGTTTCA ATAATTCGTC    2640

AACCAGGGTT GTTTTACCGT GGTCAACGTG GGCGATAATC GCAATGTTAC GGATATCTTC    2700

TCTTAATTTT GTCATGATTT CCTCTATAAT ATTCAAAATT TATTTTCTAA CTGAACGATT    2760

ATACCATAAT TTCAAATAAA TAACATAACT CAAGCAAGTG TAAATGTTTT CACTCTGCTT    2820

TTCTTTTCAC GTCAAGCCTT TTCAAAGCGA GCGACTTATG ATAAGATAGG CACAGTATGC    2880

GTTTAGATAA TTTATTAGCT CAAGAAAAAA TCAGCCGAAA GGCCATGAAG CAAGCACTCC    2940

TCAGAGGGGA AATTCTAGTC GATGGTTGCC CAGCCCGCTC CCTAGCTCAA AATATCGATA    3000

CAGGACTACA AGAACTCCTT TTTCAGGATC GAATCATTCA AGGCTATGAA CACACCTATC    3060

TTATGCTTCA TAAACCTGCT GGTGCCGTTA CAGCCAACAA AGACAAGGAA CTTCCGACCG    3120

TCATGGACCT GCTTCCATCT AACATCCAGT CTGACAAGCT CTATGCCGTT GGCCGACTGG    3180

ACCGAGATAC AACGGGACTC CTCCTCTTGA CCGATAACGG TCCCTTGGGC TTTCAGCTCC    3240

TCCATCCCCA ATATCATGTC GATAAGACTT ACCAAGTTGA GGTTAATGGA CTTCTAACAC    3300

CTGACCTATA CCAAACCTTT CAAAAAGGAA TTGTCTTTTT AGATGACACT GTCTGTAAAC    3360

CCGCAAAACT AGAGATTCTA TCTGCAAGTC sCTCCCTCAG TCAAGCCTCT ATCACCATTT    3420

CAGAAGGAAA ATTTCATCAA ATCAAGAAAA TGTTCCTCTC GGTTGGTGTT AAGGTGACTA    3480
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1232

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GCCTCAAAAG AATCCAATTT GGGGACTTCA CATTGAACCC AGATTTAGCA GAAGGTAACT      3540

ACCGCCCTTT GAACCAAAAA GAGTTACAAA TCATTAAAAA CTATTTAGAG ATGAGTCGAT      3600

AAAACAAAAA AAGCTTTAAA ACTAAAGCTT TTTTCTTTTA TTTACCGAAA AATTAAGGCG      3660

ATTGCTACAA TCCAGTTAAC TACAGAAATC ACAATTCCTA AGATATTAAG AATCTTTTCT      3720

ATTTTATAGT CTAATTGTGA CTCTTTTTGG TATGAAATAG CCAAGACCAA TCCTATGATA      3780

CCCAAAATCA GGCCTACAAT TGGAAATAAC AAACCAAGAA TAATCGACAA GATACCCACA      3840

AAAAGTGGAT TTTTCTTCTT TTCTTTTATG TTCTAAGAAC TCCTTAAATT TTATACAAAT      3900

TAATTATACT ATAAAACAAT AGCTTCATCC TATCATTCGA CTAATTTGGA AATAAGGTTA      3960

GCTAGTCTTC ACTTTCCCTT TCCAAGAATC CAAGCCATAA GAAAGGATAT AAATCTCAGA      4020

AAAACCTTGT TTTTTCAAGT AAAGAGCTGC ATTTGTAACT CGTTGCGCAC GTTGGTTTTC      4080

GTAGAGAAGG ACAGGTTTAT CTTTACGAAG GGCTGCAAGA CTAGTTTTCA ACTGACTTGA      4140

AGGAATATTG CGTGCACCAA GGATATGTTT TCTGTGGAAT TCTGCTGGGT CGCGCAAATC      4200

AATCAATTGA CCCGTACGAA TCAAGGCTTC AAACTCCTCA TTGTCCACAA TTTTAGCCGC      4260

ACGGCGAATA CGAAGATAGT TAAAGCCCAT CCACGCCAAC ATTGCTAGTA TAAGTGCCCA      4320

CAAAATCCAA GTAACCATTA GTTCTTTTCT CCATTTTTCT CAATATAATC CAATTCTACC      4380

TTGTGCTCTC TGCGAAGAAC TGCTTCTGCC TCTAGATAGT CTAATTTATC CATCAACCCT      4440

GCATCGTAAA TCCGAGATAG TTCCAACTTC ATCAGTTCAA TATCATATAA GCGTTTTCCC      4500

ATGTAAACAA TAATACCAAA TCGTTTGAGG AATTGCTGCA CATCATAGAA TGTTTTCATA      4560

AGACTCATTC TAGCAAAATT TTGTGTTTTT TTCAAGAAGA GACTCACACA ATGCTCCTTA      4620

TTTTCCTATC TTCTTTAGCG ATTCTAAGGC AAGTATGGTA CAATAAAAAC ATGGGGATTC      4680

AACAATTACA TT                                                         4692
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(2) INFORMATION FOR SEQ ID NO: 221:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 706 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 221:

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GCTAAAAAGC TGATAATCTT CGACTCCTGT ATATGATGTG TCTTTTCATG TAAGACACGC      60

GCCGCCAGAA TCATGGCAAG AGCTGCAAGA CTGGCAAGTA AGAAGCCGAT AAGATAGGCA      120

AAAAGATAAG TGAATTTGAC AAAGAAAGTC AAAAGAACTA GGAAACCAAA GCCTCCTCCA      180
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1233

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AAAACTACCA AAGTCTTTCG TAAATCCCAG ATTTTATCCA ACTGCTTGAC GAGGGAAGTC      240

GTCTGACGAA CGCCTACAAT AGTTGCTAAC ATACTTCCTA AAAAGAATGG ATAGACATGA      300

GTTAAACTGG AGAAATAAAC AGAGGAATAA GAGGTCACTA GAAAACTACC AATAAACATG      360

GAGAAGAAAC TGATCAAGAA GGCAACAGCA GATAAGAGAA AGACCATCCC CTTCAACTGA      420

CCATTTGATT TAGCTTGTTT GGATAAGAAC CAAACTGCCA ATCCCCAAAG AATATAGTAG      480

TGAACCTCAA CTGCCAAACT CCAATTATGA ACAAACAAAT GAGGAATGAA CTGAGATTCA      540

TAACTCCCAC CTGTTAGGAG TTCATAGAAG TTGGTCATAA AGCCTAAGAC GCCCGCAATC      600

TGGCCACCAA TTCCAGCAAC ATAGTCTTGG CGAACCAAGA AAGTAAAAGG CATGGTCACC      660

AAGACCATCA AAACCACAGG TGGCACAATC TCGATAAAAG CGTCTT                     706
```

(2) INFORMATION FOR SEQ ID NO: 222:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3236 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 222:

```
CAGCTGATGG GCAATATCAG TCATAGAAAT TTTTTCAATT AACTTTTGAG CAATTTTTTG       60

GTTGATGATA CGAGGGATTT GGTGATTTTT CTTTACCAGG GGAGTCTCAG CAACCATCAT      120

TTTTGAACAG TGATAGCACT TGAAACGGCG TTTTCTAAGG AGAATTCTAG AAGGCATACC      180

AGTTGTTTCG AGGTAAGGGA TCTTAGACGG TTTTTGAAAG TCATATTTCT TCATTAGACT      240

TCCACAATCA GGGCAAGATG GAGCCTCATA ATCCAGCTTA GCGATAATTT CTTTGTGGGT      300

ATCCATATTG ATGATATCTA GAATCTTGAT GTTTGGGTCT TTAATATCGA GCAGTTTTGT      360

GATAAAATGT AATTGTTCCA TATGATTCTT TCTAATGAGT TGTTTTGTCG CTTTTCATTA      420

TAGGTCATAT GGGACTTTTT TTCTACACAA AAATAAGCTC CATAATATCC ATAGGGGATT      480

TACCCACTAC AAATATTATA GAGCCCGAAA ATATGGGAAA ACTGATCCTT GTTTCTGCTT      540

TTGTCTATAG AAGAATAATA AAGATTATCT TCTTCAAATT CTCCGATATT CTCTAAAGTT      600

TTGTGCAAGT TGCACAGAAC TTGTTTATTT TTTTGGTCAT CTTGCCATAG AAATATAAAG      660

CGTTTTCATA TATAATATAA TTATCAAAAG ACAAAAGGAG TTCACCTCAT GGTAGAATTG      720

AATCTTAAAA ATATTTACAA AAAATATCCA AACAGCGAAC ACTATTCAGT TGAAGATTTC      780

AACTTGAACA TCAAAGATAA AGAATTTATC GTTTTCGTAG GACCTTCAGG ATGTGGTAAA      840
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                                      1234
TCAACTACAC TCCGTATGAT TGCTGGTCTT GAAGACATTA CAGAAGGTAC TGCATCTATC    900

GATGGCGTAG TTGTCAACGA CGTAGCTCCA AAAGACCGTG ATATCGCCAT GGTATTCCAA    960

AACTACGCTC TTTACCCACA CATGACTGTT TATGACAACA TGGCTTTCGG TTTGAAATTG   1020

CGTAAATACA GCAAAGAAGA CATTAACAAA CGTGTTCAAG AAGCAGCTGA AATACTTGGA   1080

TTGAAAGAAT TCTTGGAACG TAAACCAGCT GACCTTTCAG GTGGTCAACG TCAACGTGTT   1140

GCCATGGGGC GTGCGATTGT CCGTGATGCG AAAGTATTCT TGATGGACGA ACCTTTGTCA   1200

AACTTGGATG CCAAACTTCG TGTATCAATG CGTGCTGAAA TCGCTAAAAT TCACCGTCGT   1260

ATCGGAGCTA CAACTATCTA TGTAACTCAC GACCAAACAG AAGCGATGAC ACTTGCAGAC   1320

CGTATCGTTA TTATGTCAGC TACTAAGAAC CCTGCTGGTA CAGGTACTAT CGGACGTGTA   1380

GAACAAATCG GTACTCCTCA AGAAGTTTAC AAAAATCCAG TTAACAAATT CGTTGCAGGA   1440

TTCATCGGAA GCCCAGCTAT GAACTTCATC ACCGTGAAAT TGGTTGGTAG CGAAATTGTT   1500

TCTGACGGTT TCCGTTTGAA AGTGCCAGAA GGAGCATTGA AAGTTCTTCG TGAAAAAGGC   1560

TACGAAGGAA AAGAATTGAT CTTTGGTATC CGTCCAGAAG ACGTGAATGC AGAACCTGCT   1620

TTCCTTGAAA CATTCCCAGA CTGTGTTGTA AAAGCGACTA TCTCTGTATC AGAACTGCTT   1680

GGTTCAGAAT CTCACCTTTA CTGTCAAGTT GGTAAAGACG AGTTTGTTGC AAAAGTTGAT   1740

GCTCGTGACT ACTTGCAAAC AGGTGCAACA GTTGAGCTTG GATTTGACTT GAACAAAGCA   1800

CACTTCTTCG ATGTAGAAAC TGAAAAAACA ATCTACTAAA ATAAATAAAA TTCAAAGCAC   1860

TACAAGAAAA GATATCTCTT TATCAATTGT AGTGGAGAGA TATCAGTTAA TCTAGGGAGA   1920

GAAACAAAAT GCTTCTCTCC TTTTTGCTAG AGAAGTCATA TTATGCATCT ATATTGTGAT   1980

GCTCTTTAAT ACTCTTCGAA AATCTCTTCA AACCACGTCA ACGTCGCCTT GCCGTACGTA   2040

TGATTACTGA TTTCGTCAGT TTTATCTGCA ACCTCAAAGA TGTACTTTGA GCAGCTTACG   2100

GCTAGTTTCC TAGTTTGCTC TTTGATTTCC ATTGAGTATT ATTTGTGGGT ACCATCTACA   2160

AGTGAAGCTA TATGCGTAAA CTACGTGAGC AATTGAATTC GAACTAGAGA GGTAATAATA   2220

AATTTATGCT ATAGTTATGG TGACTTGTAT GCTTTTGATT CTAGTTTATC AAATAATAGA   2280

TTAGAATTGT CAGATAATAT CATTTTGTGT TATAATGAAG AAAAAACAGA GGTGTTCAAA   2340

TGTCAGAAGC AGGTCATAAG TTTTTAGCAA AATTGGGGAA AAAACGCTTA CGTCCAGGTG   2400

GAAAGCGTGC CACAGATTGG TTAATTGCAG AAGGAGGATT TTCAAAAGAA AAGAGAATAC   2460

TAGAGGTTGC GTGTAATAGG GGAACTACAG CAATTGAGTT GGCACAGCGT TTTGGTTGCA   2520

AGATAACTGC TGTTGATATG GATGCTCAAG CTTTAGAAGT GGCTAAAAAA TCTGCTGGAA   2580

CGGCAGGTGT TGCTCATTTA ATCAGTTTTG AAAGAGCAAA TGCAATGAAA CTTCCTTATC   2640
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1235

AAGATGCTAG TTTTGATATT GTTATAAATG AAGCTATGCT GACTATGCAA GCCGATCAAG   2700

CTAAGAAAAA ATGTGTAATG GAATATCTAA GGGTATTAAA ACCTGGAGGT CTTCTCTTGA   2760

CACATGATGT GCTTCTTAAG GAAGCTAAAG AGTCTATCAG ACAGGAATTA TCACAAGCAA   2820

TTCATGTAAA TGTAGGTCCT TTAACTCAAG ATGGTTGGGA ACAGGTGATG ATAGAATCAG   2880

GTTATTGTGA TGTGAAAGCA TTGACTGGTG AAATGACATT AATGAAATTA TCGGGTATGA   2940

TTTATGACGA AGGTTTGCTA GGAACTTTGA AAATTTGTGT AAATGCTTGT AAAAAGGAGA   3000

ATAGAAAGCA GTTTTTAACT ATGTATAAAA TGTTTGCTAA GAATAAACAG AAAATTGGGCT   3060

TTATTGCGAT GGCTAGTTAT AAATCGTCAA AACGTTAGAT AATTATTGAA GTTAACTTTT   3120

CCTTTTTTCT TTCTTAAAAA ATATGCTATA ATAGAGAGTA AAAAACTTTG AAAGAAAGAA   3180

AAAGATGAAT TTAAAAGATT ACATTGCAAC AATTGAAAAT TATCCAAAGG GTACCG   3236

(2) INFORMATION FOR SEQ ID NO: 223:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 2885 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 223:

CCTGACTTTT CAAATTGGTT AGTTTGCCAC ACTTGGTTTA TATGGTCGTG GAAAGCATGG   60

CTATTACTTC TCAAAGGGCG ATTTCTCACC CCATGAAAAG TGTCTATTTT TGTTTAGGTT   120

TGTAAGTTAA TTCATTGTCA CATATTACTC TTTAACTGAT TGAGTGAGTA CCGCTTATAT   180

TTGATGCCAA ACGCCTTAAA AGTGTTACCC TCAAGTCCTT TTAGAATACG GCTATAATTC   240

CGCTCATTGT AAACTATCTT AAGCTCATCA CTATCTAGGT TGGTATTAAA AATGGTATTT   300

TCACGATTGT TTAGCACGTC AAAGAGTAAA TCCTGCTCCC AGTCACTCTT AGGCTTAATA   360

ACAGCATTTT TTGCTCCTAA ATCATCAATA ATTAAGTAAT CAACAGACTT CATGAGTTCA   420

GTAGCTTCAA ACTCTGTAAG TGTTGCACCT TTACCATAAT TCCACCCCTC TTTAATTTGT   480

TTGATCATTT CGGTTAGGCT TACAAAAAGC ACACTCTTAG GTTCTCCTTT TGTCTTATAC   540

CCCTCATTTA TACCTTTGGC AATAGCAACT GATAAAAGTG TTTTTCCAAT CCCTGTACCT   600

CCTGTGATAA GCGTATTTCC CCTCATGCCA TCAAGATATT TTTGTACCTG ACCTTTTGCA   660

AATTCTAAAA ATCGCTTTTC TTCTGATGTT ACAGCATTAA AATCATCAAA AGTTTTAGTT   720

TTAAACTCAT CTGCTACATA GCTCTTATTG CTCATCAACA CATTATAAGT TTGCATATAT   780

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                                1236
AGTTTAGCAT TCAAATTATC AGCAATCGCA TCTTCTTCAT CTTGCTTTTT CTGTTCTTCT       840

TGGCATTGTT CACAATAGGG TGGGATACAG CGAACTTCTT TTATTGCCTC TCCGTTCTCA       900

TTCCACCCCA CTACTACATG TCTTTCTCCT TTGATTTGTG TTAGCTGTAT TTCATGCTTA       960

GGACACAATT CGTCTAGTTT AAATGTCTCA ATATTTCCTA AACTAGATTG TAATGATTTC      1020

ATTTTCTGAC CTCCTAAAAT GGTTTTTCTT GTGTTGGTAT CCAATCTTCA TAGCTGGTAG      1080

GCTCTAGTTG ATTGGTTTGC TGTTTTTTAG CCTCACGCGC TGCCCTGCTA TTTCTAACAA      1140

GTTCCACCGT CAATAAATTG TCCTGTTTCC AACGGTTAAG GATTACCTTG ATGTATGCAA      1200

AGTTTGCTTT ACCCTGACTG ACAGCCTCTT TTAACGCCTC ATGGATAAGC TCTGGGCTAA      1260

AATCTTCTAG CATATACTGC AATTCTTGAA TCTGTAACGG TGACAATGCT TTACCTGTCT      1320

CAGCTCGCTT CATATTCAAC AAGTCGTCTA TTTCCACACT GGTTACTTTT TTATTTACAA      1380

AATCAGAAAT CAGTTGAAAA ATGTTTGGAC TTTGTAGCTG GATTTCAGCC ATTACCTCAT      1440

CAAATTCTGC TTGTGTCATG TTGTCTAAAT CTAGTGTCAT TGCATTGCCT CCTCAAACTT      1500

CTCTATAAGA CAACTTTTAT TTGCTTTCTG AGTTCCATTT TTAGAGTTAA AAAGAATATC      1560

TTTTAAGGTT ACAGTAGCCT CTAAATACTC CTTTTCAGCA TGCTCTATAT ACGCCTGTTG      1620

CTCTGCTTCG TTCTCAAAAA AGTGCTTAGC TTGGCGTTTA AAGAATGCTT TTCGCATAGC      1680

GTCCATTTCA AAAATACCAG GGGCGAAAAA CATTCCCGTA GTGCTTTTAG AGACCGCTTC      1740

GATTTTATGG CTTTCATTCA ATTCAGGAAG TTCAATCCAA AGTAAACGGG ACAACTCATC      1800

TTTGATGGAT TTTGTCTGAC TTTCCAATAA AGAAAGGATT CTTAGGCCAT TTTCTTCGCT      1860

AATTTCTCGC ATTTCTGCGC TAATTCTGTC TATACGTCTA GTTAAATTCT CATATGTTGT      1920

TTCTGTCATG TTTTTACCTC TGTTTCTTTG TTGGTGTGAT TTTTTAGCTT ATTTTTTTAC      1980

TTCTAAACAT CATTGTCTTA ATTTCCTGAT AACTCATTTT CAATTCAATC ATAGCTATTG      2040

CCATATCCTC AAATGCCTGG TACTGCTCCA ACTCCTCACT AGTCAAGCTA TCGATACCGT      2100

TATAGCCCCC ACGCTCTTCT CTTAACTGCT TAGCGTTCAT GTCTGTTACT GCCTTTAGTA      2160

GCAAGTTGTT CATGGTGCTA TGCGCGTGCT TTGGTGCATT AGGCCATGTT TCTATACTGT      2220

CATGCAAGGT TTTTCTTTTC GGTTTTTCTA GCGCCCTCTG CAGACGAATT TCAGAAAGTT      2280

CCTCACGCAT TTCAAAGAAT GCTTTGACTA GGTTTAGTTT GAATTGCCGT ACTGTTTCGG      2340

TATTCTTTAA ATAAGTGATC AGAAAAGTAG CCTGTTGCTC GTTCAGAATA TAGGATTTTT      2400

TAGGTTGTCC TCTAGTATCT AATTTATGGA TTTTAAATCC AAGTATTCCC AACTCTTCAA      2460

AGTCAGCCTT ATTTTCTCTT ATTAAGCGCG TGATAGTGTG GTGTTGTACT TCAGCACATT      2520

CAGCGATGAT CTCGCTTGTG GTGTACGGCT CTTTCTTACC GTCCATGTAA ACTAGTTCCA      2580
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1237

TTACGGTTCT ACCTCCTGTA TAAATCTGGT TAGCTTACTT TTTAATTGCC TCCTCTAGCC   2640

TCTTTTTTAG CCTCTAAAAC GGCTTTGGCT AGTGGTTAAT ATTATTTACC ACTTGTCTCT   2700

ATAAACGTGT TAGAGGCCTT TATAACGACT TGTATCGCTG TATCGATATC CTCCGTGGAA   2760

TAGTAGATTT ATTTTCTAAT ATCATTCAAG ACTTGTTTAA CCCATTTCTT GAAAGAAATA   2820

AAATTACATC TTCTTTATCC TTGGCATCTG CTTTGTCTGA GACAAATTAG AATGTCAATA   2880

CTTGG   2885

(2) INFORMATION FOR SEQ ID NO: 224:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 3144 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 224:

TATCAATCCT TTCCCATTAT AGGAGCAACA GAGTGGGAGT AGTCATCTAA GGACTAATTT   60

ATGTATTTTT ACGAGTCAGT ATCTTGGGAT ACTGGTTTTT ACTTTTCTAG ACTTTTTGAC   120

TACTTGTTAA AACTGGGATA ATTTTCGACT GTTTAACAGT TATTATGCAA AGTCTAAAAG   180

ATTAGAATTG TCAAAACAAT CCGTCTAGGC TTGATTTTAT CCTTTATTTA CTATAAAATC   240

AGAAGGAAAA ATGTCAAACT TTTATATTGC AAATAGGAGA AATCATGACA AAAACATTAA   300

AACGTCCTGA GGTTTTATCA CCTGCAGGGA CTTTAGAGAA GCTAAAGGTA GCTGTTCAGT   360

ATGGAGCAGA TGCTGTCTTT ATCGGTGGTC AGGCCTATGG TCTTCGTAGC CGTGCGGGAA   420

ACTTTACTTT CGAACAGATG GAAGAAGGCG TGCAGTTTGC GGCCAAGTAT GGTGCCAAGG   480

TCTATGTAGC GGCTAATATG GTTATGCACG AAGGAAATGA AGCTGGTGCT GGTGAGTGGT   540

TCCGTAAACT GCGTGATATC GGGATTGCAG CAGTTATCGT ATCTGACCCA GCCTTGATTA   600

TGATTGCAGT GACTGAAGCA CCAGGCCTTG AAATCCACCT TTCTACCCAA GCCAGTGCCA   660

CTAACTATGA AACCCTTGAG TTCTGGAAAG AGCTAGGCTT GACTCGTGTC GTTTTAGCGC   720

GTGAGGTTTC AATGGAAGAA TTAGCTGAGA TCCGCAAACG TACAGATGTT GAAATTGAAG   780

CCTTTGTCCA TGGAGCTATG TGTATTTCAT ACTCTGGACG TTGTACTCTT TCAAACCACA   840

TGAGTATGCG TGATGCCAAC CGTGGTGGAT GTTCTCAGTC ATGCCGTTGG AAATACGACC   900

TTTACGATAT GCCATTTGGG AAAGAACGTA AGAGTTTGCA GGGTGAGATT CCAGAAGAAT   960

TTTCAATGTC AGCCGTTGAy ATGTCTATGA TTGACCACAT TCcAGATATG ATTGAAAATG   1020

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                                      1238
GTGTGGACAG TCTAAAAATC GAAGGACGTA TGrAGTCTAT TCACTAyGTA TCAACAGTAA    1080

CCAACTGCTA CAAGGCGGCT GTGGATGCCT ATCTTGAAAG TCCTGAAAAG TTTGAAGCTA    1140

TCAAACAAGA CTTGGTGGAC GAGATGTGGA AGGTTGCCCA ACGTGAACTG GCTACAGGAT    1200

TTTACTATGG TACACCATCT GAAAATGAGC AGTTGTTTGG TGCTCGTCGT AAAATCCCTG    1260

AGTACAAGTT TGTCGCTGAA GTGGTTTCTT ATGATGATGC GGCACAAACA GCAACTATTC    1320

GTCAACGAAA CGTCATTAAC GAAGGGGACC AAGTTGAGTT TTATGGTCCA GGTTTCCGTC    1380

ATTTTGAAAC CTATATTGAA GATTTGCATG ATGCTAAAGG CAATAAAATC GACCGCGCTC    1440

CAAATCCAAT GGAACTATTG ACTATTAAAG TCCCACAACC TGTTCAATCA GGAGACATGG    1500

TTCGAGCTCT TAAAGAGGGG CTTATCAATC TTTATAAGGA AGATGGAACC AGCGTCACAG    1560

TTCGTGCTTA ATGTAGTTGT TTAGTTTTAA AAAACTATGC AAAGCTCCAT ATACAACACT    1620

TAAACGAGAT TAAAGAATGG CGAAATCCCT TGATGCGCAA GAGATTAGCT GTCTTTTTTA    1680

TTTTTTAAGT GATAAAGTCG GAGTTTAGGC ATCAAAGCCT ATCAAATTAA ACAAAGAAGC    1740

GATGTCTTAG ATATTTTGAA AAAAATTAAT AAGCAGAAAA CTCTCTATTA TTTTGTTGTA    1800

GAGAGTTTTT TGTTAATAAA ATTTCACAAA ATGACATTTA TATATTGCAT TAAGTTAGAT    1860

ATATGATATA ATATTGTTAA AAAGAGGCGC AACTTTTTAA AATTAATGAG AATCAAAGAG    1920

AAAACCAATA ATATTAATGG AGGAATAAAA AATGTAAGTA AGCATTATGG TCATTCAATC    1980

ATTCTCAAAG ATATAAATTT TGCACTTAAC AAGGGTGAAA TTGTTGGTCT AGCAGGGAGA    2040

AATGGAGTTG GTAAGAGTAC GTTGATGAAA ATTCTTGTTC AGAATAATCA ACCGACTTCA    2100

GGTAATATTA TAAGCAGTGA TAATGTTGGG TATTTAATCG AAGAACCAAA ATTATTTTTA    2160

TCTAAAACAG GTTTAGAGAA TTTAAAATAT TTGTCAAATT TATATGGTGT TGACTACAAT    2220

CAAGAAAGAT TTAGATGTTT GATCCAAGAG TTAGATTTGA CTCAGTCTAT TAATAAAAAA    2280

GTAAAGACCT ATTCTTTGGG TACAAAACAA AAATTAGCTT TGCTTCTAAC TCTCGTTACG    2340

GAACCTGATA TATTGATTTT AGATGAACCG ACTAATGGTT TAGATATTGA ATCATCACAA    2400

ATAGTTTTAG CGGTTCTAAA AAAATTAGCT TTACATGAAA ATGTGGGAAT TTTAATATCG    2460

AGTCATAAAT TAGAAGACAT TGAAGAAATT TGTGAGAGAG TTCTTTTCTT GGAGAACGGG    2520

CTTTTGACAT TTCAAAAAGT AGGAAAAGAT AGTCATAATT TCTTGTTTGA GATAGCTTTT    2580

TCATCAGCTA CAGATAGAGA CATTTTCATT ACCAAACAAG AATTTTGGGA TATTGTTTAG    2640

GAAGAGGGAT TGAGAATTAC TATGTCTGGG AATATTCAAA ATAGTGAGCT TTTTAAATTT    2700

TTTAACGAAA ACTCTATTAA AGTAGTTGAT TTTGAAACTA AAAAAGAGAC GCTTAAAGAT    2760

ATTTACCTAA ATCGTTCAAA ATAAAGGAAG GTTATAATCA TGAAATTAAA TAAACAGAAG    2820
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1239

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AATCGGATGA TTTACGTCTT GTCTAATTTT CTATATGCTA TCTCAGTTTC CATTATTTAT      2880

GCTTTGAATG GCATTGTGTT ACTAGTCATA GTAAGTAAAT TGGGTATTCC AGGTGATTTA      2940

GGATTAAATT TTATAGTAGC TATTGTAGTC AATACAATTT TGTTAGTCCT GTTTTATTTT      3000

CTATTATCTT ACATTTTCTA TTTATACAAA TTGAAAAGTG GCTTGGTATw TGGTATTTTA      3060

GTAGCTTTAC TACTCTTTAT CTCTAATATA TTAAATACGA TGATGATGAA TACTAGTAAT      3120

GATTTGTTTA TCAAAGCAAT TGAA                                            3144
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(2) INFORMATION FOR SEQ ID NO: 225:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3766 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 225:

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TACGGTATTA TTTTTAAGGA GAAAGAATCA TGAAAATCAA AAAATGGCTT GGTCTAGCAG        60

CCCTTGCTAC AGTCGCAGGT TTGGCTCTTG CAGCTTGCGG AAACTCAGAA AAGAAAGCAG       120

ACAATGCAAC AACTATCAAA ATCGCAACTG TTAACCGTAG CGGTTCTGAA GAAAAACGTT       180

GGGACAAAAT CCAAGAATTG GTTAAAAAAG ACGGAATTAC CTTCCAATTT ACAGAGTTCA       240

CAGACTACTC ACAACCAAAC AAAGCAACTG CTGATGGCGA AGTAGATTTG AACGCTTTCC       300

AACACTATAA CTTCTTGAAC AACTGGAACA AAGAAAACGG AAAAGACCTT GTAGCGATTG       360

CAGATACTTA CATCTCTCCA ATCCGCCTTT ACTCAGGTTT GAATGGAAGT GCCAACAAGT       420

ACACTAAAGT AGAAGACATC CCAGCAAACG GAGAAATCGC TGTACCGAAT GACGCTACAA       480

ACGAAAGCCG TGCGCTTTAT TTGCTTCAAT CAGCTGGCTT GATTAAATTG GATGTTTCTG       540

GAACTGCTCT TGCAACAGTT GCCAACATCA AAGAAAATCC AAAGAACTTG AAAATCACTG       600

AATTGGACGC TAGCCAAACA GCTCGTTCAT TGTCATCAGT TGACGCTGCC GTTGTAAACA       660

ATACCTTCGT TACAGAAGCA AAATTGGACT ACAAGAAATC ACTTTTCAAA GAACAAGCTG       720

ATGAAAACTC AAAACAATGG TACAACATCA TTGTTGCAAA AAAAGATTGG GAAACATCAC       780

CTAAGGCTGA TGCTATCAAG AAAGTAATCG CAGCTTACCA CACAGATGAC GTGAAAAAAG       840

TTATCGAAGA ATCATCAGAT GGTTTGGATC AACCAGTTTG GTAATAAGAA ACAGGGAGGT       900

GGGAGAGAAA ATTCCACCTC TTGCTTTTGT ATAGAGTATA GATTGTAAAG AAGACTATTC       960

GTTCATAGAA AGGTAGAGAG AATATGGTTT TTCCTAGCGA ACAAGAACAG ATTGAAAAAT      1020
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                               1240
TTGAAAAGGA TCATGTAGCC CAGCATTATT TTGAGGTTTT GCGTACCTTG ATTTCTAAGA      1080

AATCAGTCTT TGCCCAGCAG GTTGGACTCA AGGAAGTCGC AAATTATCTG GGTGAGATTT      1140

TCAAGCGTGT TGGAGCTGAA GTGGAGATTG ATGAGAGCTA TACAGCGCCC TTTGTCATGG      1200

CACATTTCAA GAGTTCGCGT CCAGATGCCA AGACCTTGAT TTTCTATAAC CACTATGACA      1260

CTGTGCCAGC GGATGGGGAT CAGGTCTGGA CAGAGGATCC kTTTACGCTT TCGGTCCGCA      1320

ATGGCTTCAT GTATGGGCGT GGGGTTGATG ACGACAAGGG TCATATCACA GCTCGCTTGA      1380

GTGCTTTGAG AAAATATATG CAGCACCATG ATGATTTACC TGTCAATATC AGCTTTATCA      1440

TGGAGGGAGC GGAGGAATCG GCTTCAACAG ACCTAGATAA GTATTTGGAA AAGCATGCAG      1500

ACAAACTCCG TGGGGCGGAT TTGTTGGTCT GGGAACAAGG GACCAAAAAT GCCTTGGAAC      1560

AGCTGGAAAT TTCTGGTGGC AATAAGGGGA TTGTGACCTT TGATGCCAAG GTAAAAAGCG      1620

CTGATGTGGA TATCCACTCG AGTTATGGTG GTGTTGTGGA ATCAGCTCCT TGGTATCTCC      1680

TCCAAGCCTT ACAGTCTCTT CGTGCTGCGG ATGGCCGTAT CTTGGTTGAA GGCTTGTACG      1740

AAGAAGTACA AGAGCCCAAT GAACGAGAAA TGGCCTTGCT AGAAACTTAT GGTCAACGAA      1800

ACCCAGAGGA AGTTAGTCGG ATTTATGGAT TGGAGTTGCC TCTCTTACAG GAGGAGCGGA      1860

TGGCCTTTCT AAAACGTTTC TTTTTCGATC CAGCGCTTAA TATCGAAGGA ATCCAGTCTG      1920

GTTATCAAGG TCAGGGTGTT AAGACTATTT TACCTGCAGA AGCCAGTGCC AAGCTAGAGG      1980

TTCGTCTGGT TCCGGGCCTA GAACCGCATG ATGTTCTGGA AAAAATTCGG AAACAGCTAG      2040

ACAAAAATGG CTTTGATAAG GTAGAATTAT ACTATACCTT GGGAGAGATG AGCTATCGAA      2100

GCGATATGAG CGCACCAGCC ATTCTCAATG TGATCGAGTT GGCCAAGAAA TTCTATCCAC      2160

AGGGCGTTTC AGTCTTGCCG ACGACAGCGG GGACAGGACC TATGCATACG GTCTTTGATG      2220

CCCTAGAGGT ACCAATGGTT GCATTCGGTC TAGGAAATGC CAATAGCCGA GACCACGGTG      2280

GAGATGAAAA TGTGCGAATC GCTGATTATT ACACCCATAT CGAATTAGTA GAGGAGCTGA      2340

TTAGAAGCTA TGAGTAGAGA TATTATCAAG TTAGATCAGA TCGATGTGAC TTTTCACCAA      2400

AAGAAGAGAA CCATCACAGC GGTTAAGGAT GTGACCATTC ACATCCAAGA AGGGGATATC      2460

TACGGAATCG TTGGATATTC TGGAGCAGGA AAATCAACCC TTGTACGGGT GATTAATCTC      2520

TTGCAAAAAC CATCTGCAGG GAAAATTACC ATTGACGACG ATGTGATTTT TGACGGCAAG      2580

GTGACCTTGA CGGCAGAGCA GTTGCGTCGT AAACGTCAAG ATATCGGAAT GATTTTCCAG      2640

CATTTTAACC TGATGAGCCA AAAGACAGCA GAGGAGAATG TAGCCTTTGC CCTTAAACAC      2700

TCTGAACTCA GCAAGGAAGA AAAGAAGGCT AAAGTAGCTA AGTTGTTGGA CTTGGTTGGT      2760

TTGGCAGATC GTGCTGAAAA CTACCCTTCA CAACTATCTG GAGGGCAAAA ACAGCGTGTG      2820
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1241

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GCAATTGCGC GTGCCTTGGC CAATGATCCA AAAATCTTGA TTTCAGACGA GTCAACTTCT     2880

GCCCCTTGATC CGAAGACAAC CAAGCAGATT TTGGCCTTGT TGCAAGATTT GAACCAAAAA    2940

TTAGGCTTGA CTGTTGTCTT GATTACGCAT GAAATGCAGA TTGTCAAAGA CATTGCCAAC     3000

CGTGTTGCAG TTATGCAGGA TGGGCATTTG ATTGAAGAGG GTAGTGTGCT TGAAATCTTC     3060

TCAAACCCTA AACAACCTTT GACTCAAGAC TTTATCTCAA CAGCTACAGG TATTGACGAA     3120

GCCATGGTCA AAATCGAGAA GCAAGAAATC GTGGAACACT TGTCTGAAAA CAGTCTCTTG     3180

GTGCAACTCA AGTACGCTGG AGCTTCAACA GACGAGCCAC TTTTGAATGA ATTGTACAAG     3240

CATTACCAAG TAATGGCTAA TATTCTCTAT GGGAATATCG AAATTCTCGA TGGTACTCCT     3300

GTTGGAGAAT TGGTGGTGGT TTTGTCAGGT GAAAAAGCAG CGTTGGCAGG TGCCCAAGAA     3360

GCCATTCGTC AAGCAGGTGT ACAACTAAAA GTATTGAAGG GAGTACAGTA AGATGGAATC     3420

ATTGATTCAA ACCTATTTAC CAAATGTCTA TAAGATGGGT TGGGCTGGTC AGGCAGGCTG     3480

GGGAACGGCT ATCTACTTAA CTCTTTATAT GACAGTTCTT TCCTTCATTA TCGGAGGCTT     3540

CTTGGGGCTA GTGGCAGGTC TCTTTCTCGT CTTGACAGCG CCAGGTGGTG TCTTGGAGAA     3600

TAAAGTCGTA TTCTGGATTT TAGACAAAAT TACCTCAATT TTTCGTGCGG TTCCCTTTAT     3660

CATCCTCTTG GCAATCTTGT CACCACTTTC TCACTTGATT GTTAAAACAA GTATCGGGCC     3720

AAATGCAGCC CTTGTCCCAC TTTCTTTTGC AGTCTTTGCC TTCTCC               3766
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(2) INFORMATION FOR SEQ ID NO: 226:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2520 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 226:

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TGTTGCTGAG TTAATCGGTA CGTTCATGTT TGTATTCGTC GGGACAGGAG CTGTTGTTTT      60

TGGAAATGGT CTTGATGGCC TTGGTCACCT TGGAATCGCC TTTGCCTTTG GTTTGGCAAT     120

CGTGGTGGCA GCCTACTCAA TCGGAACTGT TTCAGGTGCT CACTTGAACC CGGCTGTTTC     180

GATTGCTATG TTTGTAAACA AACGTTTGTC ATCTTCAGAA CTTGTAAACT ACATCCTTGG     240

TCAGGTTGTT GGAGCTTTCA TCGCTTCTGG CGCTGTCTTC TTCCTCTTGG CTAACTCAGG     300

TATGTCAACT GCTAGTCTTG GTGAAAATGC CTTGGCAAAC GGTGTCACTG TCTTTGGTGG     360

TTTCTTGTTT GAAGTCATCG CAACTTTCTT GTTTGTATTG GTTATCATGA CTGTGACTTC     420
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1242

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AGAAAGCAAG GGCAATGGCG CGATTGCTGG TTTGGTAATC GGTTTGTCAT TGATGGCGAT    480

GATTCTTGTC GGATTGAAGA TTACTGGACT TTCAGTAAAC CCAGCTCGTA GCTTGGCACC    540

AGCTGTCTTG GTAGGCGGCG CAsCCTTCAA CAAGTTTGGA TTTTCATCCT TGCACCAATC    600

GCTGGTGGAG TTCTTGCAGC CCTTGTTGCA AAAAATTTCC TTGGAACAGA AGAATAATTG    660

AAACTCAAAA AGCCTTGCTC CTCATCTTGA GGAACAGGGC TTTTTCGTAT GATACTCTTC    720

GAAAATCTCT TCAAACCACG TCAGCTTCAT CTTGCCGTAG TATGGTTACT GACTTCGTCA    780

GTTCTATCCA CAACCTCAAA ACAGTGTTTT GATCTGACTT CGTCAGTTCT ATCTGCAACC    840

TCAAAACAGT GTTTTAAGCT GACTTCGTCA GTTCTATCTG CAACCTCAAA ACAGTGTTTT    900

AAGCTGACTT CGTCAGTTCT ATCTGCAACC TCAAAACAGT GTTTTAAGCT GACTTCGTCA    960

GTTCTATCTG CAACCTCAAA ACAGTGTTTT AAGCTGACTT CGTCAGTTCT ATCCACAACC   1020

TCAAAACAGT GTTTTGATCT GACTTCGTCA GTTCTATCCA CAACCTCAAA ACAGTGTTTT   1080

GATCTGACTT CGTCAGTTCT ATCCACAACC TCAAAACAGT GCTTTGAGCA ACcTGCGGCT   1140

AACTTCCTAG TTTGCTCTTT GATTTTCATT GAGTATGACT TTAGCGGTTG TCAATTTTCT   1200

CTGGATAAAG GTCGTGTTGG AAGAGGCGTT GTTCTGCCAA GCCCTCATAC TTAGTTCCTT   1260

GCTTACCGTA GTTGTAGTAG GGGTCGATTG AAATGCCACC GCGCGGAGTG AATTTTCCCC   1320

AGACTTCTAA ATAGCGAGGG TCTAGCAAGT TGACCAAGTC TTTCCCGATG GTGTTGATAC   1380

AGTTTTCGTG GAAATCTCCG TGGTTTCGGT AGCTAAATAG ATATAGTTTG AGGGATTTTG   1440

ACTCGACACA GAGCTTGTCA GGAATGTAGG AAATATGAAT CGTCGCAAAG TCTGGCTGAG   1500

CAGTGATTTG TCCCAGCAGA GACATATCGA GGATATGGTG ACGAATGCCC TGTTCCTTAG   1560

CGATTTCTCT AGTAATTTGA ATTTCGAGGT GATGACGTTG GCCGTAGGCA AAGGTGACAG   1620

CTTCGACTGT TTCATAGTGT TGCATGACCC AGAAAAGGCA GGTTGTTGAA TCTTGACCAC   1680

CACTAAAGAC GACCAAGGCT AATTGACGTT TCATAGTACT CCTTCCAAAA TGGGAAATGT   1740

TCAGAGCACG CAAAAAGCTC CCATTAGGGA GCTAAAAAAT ACCAAATCGA GGTTTTTTA   1800

GCGATGGCAT ATCCCAAACA TCGTAATATT CTACTTATAT AGTAAAATGA AATAAGAACA   1860

GGACAAATCG ATCAGGACAG TCAAATCGAT TTCTAACAAT GTTTTAGAAG TAGAGGTGTA   1920

CTATTCTAGT TTCAATCTAC TATAGTCTAG CATATTTTTT GAAAAATGGC AAAGGGCAAG   1980

AAAAAAGAGA CCAAAGAAAG TACTTGGTCT CTCGTTTGAT TAGCTCAATT CAGCAATGAT   2040

GGCCTTGATT TGTTCTGCTG TGTGAACACC TGCAACTTGT TTGACAACTT GGCCGTCTTT   2100

TTTGAAGAGA AGAGTTGGAA TAGACATGAT TCCAAAAGCA CGAGCTGTGT TTGGATTTTC   2160

ATCAACGTCC ATTTTAACGA TTTTCAAGAC ATCTTCTGAA AGTTCTTCAG ACAATTTGTC   2220
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1243

CAAGATTGGA CCTTGCATAC GACATGGACC ACACCAAGTT GCCCAGAAGT CTACTAAGAC   2280

CAAACCGTCT TTTGTTTCTT GTTCGAATGT TGCATCTGTA ATTGCTTTTG CCATTGTATT   2340

TCTCCTTTTT TTAGTTATAT TGGCTTAAAT CTTGTTTCAT GAGATAGAAG AAGATATCTC   2400

CATAAGTCCC ATGGTAGTCC AAATTATGAC CCTTGTAAGT TAATTTTTGG ACAGGGTAGT   2460

AkkCTGCGAC GCCGATAAGG CAAGCTTGTT GCGAACGTTC AAAGTCTTCA TAAGACTCGG   2520

(2) INFORMATION FOR SEQ ID NO: 227:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 5278 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: double
       (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 227:

ACTCAGTTAG ATTTTGTTTT CAAAAACAAC GAAGAAAAAG ACCATGTTGC TCTACTTGGA   60

AGAATTGGCT CCGAACGTGT TTATCGATAT ATTAATAAAA AATATTTAGA TTTACCGGAA   120

ACATTCGAAA ATTATAATGT TTTTGTACCA GAAGCTAATG GAAGTGGTGC CTTAGGTGAA   180

GTCTTATCAA CACCCCTAAT CGGGGAACCC CTAATCGGGC ATACAGATAC TTTTTTTATCT   240

ATTGGTAATT TTAAAACAAA ATTTGAAGCC GATGCTTGTA TTAAATTTAT TAAAACTAAA   300

TTCGCTAGAG TATTATTAGG TGTTTTGAAA GTTACTCAGC ATAATTCACG CAAAACTTGG   360

TATTACGTCC CCCTCCAAGA CTTTACGGTC AATTCGGACA TTGATTGGAC ACAATCAGTG   420

ACTGATATTG ACCGCCAGCT TGATCAAAAA TATGACTTTT CCCCTGAAGA AATTGCCTTT   480

ATTGAGAATC ATGTAAGGGA GATGGATTAG AAAAGTATTT TTATTTGACA AATAGTGCTC   540

AATGATCTAA AATGACTATA TAGGATTAGG TCAGGAAGCA TACGATGCCC TGACCCTTTT   600

TGTACTTATG AGATGAGAAA GTCATTTGTT AGATAAATTG ACTCGTTAGC AAACGTTCAA   660

AAAAGGAAAA CTTATGCCAG TAGAAATTAA AACCACTAAA GAAATTCATC CTAAAATCTA   720

TGCCTACACC ACACCGACAG TAACCAGTAA TGAAGGCTGG ATTAAGATTG GGTATACAGA   780

ACGTGATGTC ACACAACGTA TCAAGGAGCA AACGCATACA GCTCATATAG CTACAGATGT   840

CTTATGGACT GGTGATGCAG CTTATACAGA AGAGCCTGAT AAGGGGAAAA CTTTCAAGGA   900

CCATGATTTC CACCATTTCC TTTCTTTCCA TGATGTAGAA CGTCGTCCCA AGACGGAATG   960

GTTCTATTTT AATGGAACTC CTGAAAAATC AAAAAATCTT TTTGATAAGT TTGTTCAGCA   1020

TGATTTGTCT GGTTATCAGC CTGGAAAAGG ACAGGACTAT ACTCTGCGAC AAGAGCAAGA   1080

1244

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AGAAGCAGTT GCTAAGACAT TAGCTTATTT CCAAGAACAT GCTGGAGGCA AGTTTCTCTG      1140

GAATGCCAAG CCACGCTTTG GTAAAACCTT GTCTACCTAT GACCTAGCTC GACGGATGGA      1200

AGCTGTCAAT GTCCTAATTG TAACAAACCG CCCTGCCATT GCTAACTCAT GGTATGATGA      1260

TTTTGAAACA TTCATAGCAG GTCAAACGAC TTACAAGTTT GTTTCTGAAT CAGATAGCCT      1320

TAAGAGTCGT CCAATCTTGT CACGACAAGA ATTTCTTGGT ATTTTAGCTG ACGATGTAAG      1380

ACAACTTGCT TTTATCAGTC TCCAAGACTT GAAAGGATCT GTTTATTTAG GTGGAGAGCA      1440

CGATAAACTC AAATGGGTAA CTGATCTGCA TTGGGACTTG TTGGTTATTG ACGAGGCTCA      1500

TGAAGGAGTT GATACCTTCA AGACTGACCA AGCCTTTAAT AAGATTCGAC GAAATTTTAC      1560

TCTGCATTTG TCAGGTACAT CATTTAAAGC ATTGGCTAAA GGAGATTTTA CAGAGGAACA      1620

AATCTACAAC TGGTCTTATG CTGATGAGCA GGCTGCTAAG TATTCGTGGT CTCTTGAGCA      1680

AGAAGAGGAA AATCCTTATG AAAGCTTGCC TCAGTTGAAT CTCTTTACCT ATCAAATGTC      1740

TCAGATGATT GGCGAAAAGT TAGAAAAAGG CGCTCAGATC GATGGTGAAA ATATTGACTA      1800

TGTTTTTGAC TTAAGTGAAT TTTTCGCTAC AGATGATAAA GGGAAATTTA TTCATGAGCA      1860

TGATGTCAGA AATTGGTTAG ATACTCTATC AAGCAATGAA AAATATCCAT TTTCAACCAA      1920

AGAACTCCGT AATGAACTCA AGCATACTTT TTGGCTTTTA GAACGTGTCG CTTCGGCCAA      1980

AGCATTAAAA GCCCTACTAG AAGAACACCC AATCTATGAA AACTATGAGA TCGTTCTAGC      2040

TGCTGGTGAC GGACGTATGT CCGAAGAAGA CGATAAAGTC AAACTCAAAT CCTTGGACTT      2100

GGTTAGAAAA GCGATAGCAG AGAATGACAA AACCATTACC CTATCCGTTG GTCAGCTGAC      2160

GACAGGTGTC ACTATCCCTG AATGGACAGG TGTATTGATG TTATCAAATT TGAAATCACC      2220

AGCTCTTTAT ATGCAGGCCG CCTTCCGTGC TCAAAATCCT TACTCATGGA GCGATAACAA      2280

AGGAAATCAC TTTCGCAAAG AAAGAGCCTA TGTATTTGAC TTTGCGCCGG AAAGAACCTT      2340

GATTCTCTTT GATGAGTTTG CCAACAACTT ATTGCTTGTA ACTGCAGCTG GTAGAGGAAC      2400

TTCAGCTACA CGCGAAGAAA ATATTAGAGA ATTATTAAAC TTCTTTCCAA TTATTGCCGA      2460

AGACCGTGCT GGTAAGATGG TTGAAATTGA TGCAAAGGCA GTTCTAACCA CTCCTCGCCA      2520

GATAAAAGCT AGAGAAGTTC TTAAACGAGG TTTTATGTCC AATCTCTTAT TTGATAATAT      2580

TAGTGGTATT TTCCAAGCAA GTCAAACAGT TTTAGATATT TTAAATGAGC TGCCAGTTGA      2640

AAAGGAAGGG AAGGTACAAG ATAGTTCTGA TTTATTAGAT TTTTCAGATG TTACAGTCGA      2700

TGATGAGGGA AATGCAGTAG TAGACCATGA AATTGTAGTT AATCAGCAAA TGCGACTTTT      2760

TGGTGAAAAA GTTTATGGAC TTGGTGAATC TGTTGCTGAG TTAGTCACAA AAGATGAGGA      2820

ACGAACTCAA AAACAGCTGG TCAATGACTT GAGTAAGACC GTTTCTTCAG TGATTGTAGA      2880
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1245

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GGAATTGAAA GCAGATTATT CTCTAAAAAC AAGGGAAACT GAGCAAATTA AGAAACAAAT      2940

TACAGCAACA CTTGAGAATG AAATTCGAAA AAATGATATC GAAAGAAAAA TTTCTGAAGC      3000

TCATATCAAG CAAGAGTTGC AACAGCAGCT CAAAGAAGCA AATGATAAAG CGCAAAAAGA      3060

TAAGATTCAA GAAGATTTGG AAAAACGTTT AGAAGAAAAT AAACTCATTC ATAAAGAAAA      3120

ACTAGAACAA ACACTCAAAA AAGAAGTGGA AAAAATGCCT GAGAAATTTA TCGAACAGGT      3180

TGAGATAAAA CGTGTGGAAC AGTTGAAACA ATCAGCTCAA GATGAAATTC GTGACCATTT      3240

ACGAGGGTTT GCAAGAACAA TTCCAAGTTT TATTATGGCT TACGGTGATC AAACTCTAAC      3300

ACTTGATAAT TTTGATGCCT TTGTTCCTGA ACATGTTTTT TATGAAGTAA CAGGGATTAC      3360

GATTGATCAG TTTAGATATT TGCGAGATGG TGGGCAGGAT TTTGCAGGGC ATCTCTTTGA      3420

TAAAGCAACA TTTGACGAAG CTATTCAAGA ATTTCTTCGC AAGAAAAAGG AGTTGGCGGA      3480

TTATTTTAAA GATCAAAAAG AAGACATTTT TGACTATATT CCACCGCAGA AGACCAACCA      3540

AATTTTCACT CCTAAACGAG TGGTGAAAAG GATGGTAGAT GATTTGGAAA AGGAAAATCC      3600

AGGGATTTTT GATGATCCAT CTAAGACTTT TATTGATTTA TATATGAAGT CAGGCCTCTA      3660

TATTGCAGAA CTTGTGAAGC GGTTATATAA TAGCAATGGC TTGAAAGAGG CCTTTCCAAA      3720

TCCTGAAGAA CGCTTAAAAC ATATTTTGGA AAAGCAAGTT TATGGATTTG CTCCGTCTGA      3780

GATTATCTAT AACATTTCCA CTAATTTTAT ATTTGGCAAT CTTTCTAAAC ATATCAGTAG      3840

GAAGAATTTT GTTTTAGCAG ATACCATTCC AGCGGCTAAA GAAGGGAGCA TTCAAAAGTT      3900

GGTTGATTCC TATTTTGAAA ATAATTAAAA AGAAGGCCGA GTCAAAATTC TTTGAAATCA      3960

GAAAAAACGC ATAAATATTGA GTGCTTTTGT ACTGCCCCCC AAAAGTTAGA CAGAAAAAAT      4020

CTAACTTTTG GGGGGCAGTT CAGACAATCC TTGGTATTAT GCGTTTTATT GTGGGAAGAT      4080

GTATAATGGA TTGAAATAAG ATATGAACAA ATCAATTAGG AATTTAAAGC ATTTTATAAC      4140

AACGTTTTAG AGTAATGGGG GGCTATTTCA ACTTCAACCT ACTATAATAC AGAAAAAAAC      4200

AACTCCCTGA TAATTCAAGG AGTTGTCTAT AGTTAAATTA GTTTTTAGAA GCTTCTTGGA      4260

ATTCTGGGTT TTTCCATGCT TCGTCAATGA TAGCTTGTAA TTCTTTAGCA GATGCTTGCA      4320

TTTTTTGAGT TTCTGCGTCG TTCAATGGGA TATTTACTGG ACGAACGATA CCATGTGCAC      4380

CAACAACAGC TGGTTGACCG ATAAAGACAT TCTCAACTCC GTATTGACCT TCTTGGAATA      4440

CTGAAAGTGG AAGTACTGCG TTTTCATCGT CAAGGATTGC TTTAGTGATA CGAGCAAGGG      4500

CTACTGCGAT ACCGTAGTAT GTTGCACCTT TTTTGTTGAT GATTGTGTAG GCTGCATCAC      4560

GAACACCTTC GAACAATTCA ATCAATTCAG CTTCTTGAAC ATTTTGAGTG TCTTTAAGGA      4620
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1246

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ATTCTTCAAG GTTTACACCA GCGATGTTAG CGTGTGACCA AACAGCGAAC TCAGAGTCAC      4680

CGTGTTCACC CATGATGTAG GCGTGCACTG AACGAGCATC CACATCCAAT TTTTCAGCAA      4740

GTGCTTGACG GAAACGAGCT GAGTCAAGTG AAGTACCTGA ACCGATAACG CGTTCTTTAG      4800

GGAAACCAGA GAATTTCCAA GTTGAGTAAG TCAAAACGTC AACTGGGTTA GCAGCAACAA      4860

GGAAGATACC TTTGAAACCA GATTCAACAA CTTGAGTTAC GATTGATTTG TTGATAGCAA      4920

GGTTTTTACC TACAAGGTCA AGACGAGTTT CACCTGGTTT TTGAGGTGCA CCTGCAGTGA      4980

TCACAACAAG GTCAGCGTCT GCACAGTCAG AGTATTGAGC TGCATAGATT TTTTTAGGTG      5040

AAGTGAAGGC AAGGGCGTGA CTAAGGTCAA GCGCATCACC AACAGCTTTT TCATGCAATT      5100

GTGGAATTTC GATAATTCCA AGCTCTTGTG CAATTCCTTG GTTAACAAGT GCAAAAGCGT      5160

AAGATGAACC TACAGCACCA TCACCGACAA GGATAACTTT TTTGTGTTGT TTAGTTGAAG      5220

TCATTGTTTT AAACATCTCC TTAATTTTAT TAGGGGATTT TCCCTAGACA ACTTCATT       5278
```

(2) INFORMATION FOR SEQ ID NO: 228:

    (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 1941 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: double
      (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 228:

```
ATAAGGAATC TCTAAAAAAT TTTAAGGAGA ATCTAGCAAA TGGATTTCAC ATGGGCACTG        60

AAGTATGCCA CTGAATTTTT GGGAACTGCC ATTTTGATCA TTCTTGGGAA TGGTGCAGTT       120

GCCAACGTTG AACTTAAAGG TACGAAAGGT CACCAAAGTG GCTGGATCGT CATCGCTGTT       180

GGTTATGGTA TGGGGGTTAT GATCCCAGCC TTGATGTTTG GTAACGTATC TGGGAATCAC       240

ATCAACCCTG CTTTCACTCT AGGGCTTGCA GTTAGCGGTC TTTTCCCTTG GGCACAAGTG       300

GTACCTTACA TTATCGCGCA AGTCTTGGGG GCTATCTTTG GCCAAGCCTT AGTTGTGGCA       360

ACATACCGTC CATTCTACTT GAAAACTGAA AACCCAAATA ACATCTTGGG AACTTTCTCA       420

ACTATTTCAA GTATTGACCA TGGTACAAAA GAAAGTCGCT ATGCAGCAAC TGTCAATGGT       480

TTGATTAATG AGTTTGTTGG TTCATTTGTT TTGTTCTTTG CAGCTCTTGG TTTGACTAAA       540

AACTTCTTTG GTGCTGAAGT GCTTCAATTC ATGAAACAAA AGGCAACAGA AGCAGGACAA       600

ACAGTTGATT TTTCTGACTT GGCTATTAAA GCACAGGTGG CTCCACACAC TGCTTCAGGA       660

CTTTCTGTGG CTCACTTGGC ACTTGGATTC CTCGTTATGG CTTTGGTAAC ATCACTTGGA       720

GGACCTACAG GACCTGCCTT GAACCCAGCC CGTGACTTGG GACCACGTCT CCTTCATGCT       780
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1247

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TTCCTTCCCA AATCAGTTCT TGGTGAGCAT AAAGGCGATT CAAAATGGTG GTATTCTTGG      840

GTACCAGTAG TAGCACCTAT CGCAGCAGCA ATTGCGGCAG TAGCTGTATT CAAATTCCTT      900

TATCTCTAAG AAATAGCTCC TTTAACATTT GAGTGAGCAC CATCTATAAG TAAGAGAGGA      960

TCAGACTGGk TCTCTCTTTT kGATTTTTaG GGAAATGAAA GAAcTCTAAA CAAACTCCTC     1020

TCCAGCAGTG GTTTAGAAGT CTCAGTGGGC TATTCCAGCT TCAATGGACT ATAGTAGGTT     1080

GCAGTTGAAA TAATAGACCC TTGTTTCTAA AACATTGTGA GAAATTGGTT TGAATTCTCC     1140

AATCAAATTG TGCAGTTTTC ATTCTACTAT ATATTATCGG AATATTATCG GAGATGGGTT     1200

CCCTATCTTG TAAGTCTGCT TTATAGTGGG TTGAAGTTGG AATAGTCCTC CCTTCTTTCT     1260

CAAACATTGT GAGGAATTGA TTTACCTTCC TCAACAAAAT GTTCAGTTTC TATTTCATTT     1320

TACTATAAAA TAAGCGATTA GGGGGGCTAT TCTTCGACCT ACATTGACTC TGCTGAGTCC     1380

TATGATTGTT ATCGTTTTAT CTGCAATTTT ATACTCAATG AAAATCAAAG GGCAAACTAA     1440

GAAGCTAGCC GCAGGTTGTT CAAAACACAG TTTTGAGGTT GTATAGTAGA TTGAAACTAG     1500

AATAGTACAC ATCTACTTCT AAAACATTGT TAGAAATCGA TTTGACTGTC CTGAACGATT     1560

TGCCCTATTC TTGTTTCATT TTACTATATA AACCAGAGAC TGTTTACATT TTCAGCAAGT     1620

GAGTGGATGG ATAATGCTGA AAACTCCTTG AAGGATAAGT CTATTTAGTA CTTTCTATTA     1680

ATTAGTTAAA TTTTTACCAA GAATAATTCA CAAAAACGTT GTAAAACACT TGCAATTTAG     1740

CTGAAATTTG ATAAAATAGT AAGGAAAGTT AGACTGTATT GCCTACTGTC TATCTATAAA     1800

ATATATTTTA TTGGAGGCTT TTACTCAAAT GGCAAAAGAA AAATACGATC GTAGTAAACC     1860

ACACGTTAAC ATTGGTACTA TCGGACACGT TGACCACGGT AAAACTACCC TAACTGCAGC     1920

TATCACAACT GTTTTGGCAC G                                              1941
```

(2) INFORMATION FOR SEQ ID NO: 229:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 755 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 229:

```
ATTTGAAGAA ATTGAAGAAA TCGTAGCCCC TACAGATGGT GAATTTTTGG GGGAAGTTTT       60

ACTTGGAACT GGGGTAGTTC TCTTAATTGG AGTAGCCTGT TGTTAAAAAG ATAGGGAGTG      120

ATAATCATGC AAGATAACTT TTTATTTGAG GAAATTGAAG AAATTTCAGT ACCAGTTAAT      180
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1248

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GATTTTTCAG CTGGACTTGC AACAGGTATC GGATTTGGTT TAGCAATCCT TGCTCTTGCT      240

GGTTGTTGAA GTTTGTTCAT TTACTAACAT CAAGCTTTTT CAATTTCATT TTAGACAGTC      300

ATTTAAATTT TCCGTATTAG TCTTGCAGCA AGAGATTAAT AGAATTAGTC ATTATTTTAT      360

TGATTGCGGA CTGAGGGACT AGAGTATGTT TTACTTAACC CCTCTTTTAT TTATTAAAGG      420

TTAGGTTTGT TATGAGAATT GTTGATAAGA TTAAGATATT ACCTACTCCT TATGAGGGAC      480

ACTATCATTT ATATATACCA TCCAGTAAGA AACATGTATT AGTTGGGAAA CAGGAAAAAA      540

ATGGTTAGAG CAACTAATAG GTCAAGAATT TACCATATCG GACTTATTAG TGTTAGTAGG      600

GAAGAAATAT TTTTAAAATA TCTTGGGACT TTAAATATAAC ATTATCTGAA AAATTAAACT     660

ATAAAAGATT TAATAAGAAT TTTGAAAAAA TCCTATCTTG TTGTCATTAT ATTTGCAACG      720

ATACATGAAA TTAGTCATGC AATAATTGCT AATAA                               755
```

(2) INFORMATION FOR SEQ ID NO: 230:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1483 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 230:

```
CCAGAAAAAC CGTAGTGGAG CTCGTGGAAC AGTGGAATTG ATTTTCCAAA AAGAATACAA       60

TAAATTTTCA AGTATCTCAA AGAGGGAGGC ATAAGATGTC AGATGCATTT ACAGATGTAG      120

CCAAGATGAA AAAAATCAAA GAAGAAATCA AGGCACATGA GGGACAAGTC GTAGAAATGA      180

CTTTGGAGAA TGGTCGTAAG CGCCAAAAAA ATAGATTGGG TAAGCTAATT GAAGTTTATC      240

CATCTCTATT TATTGTGGAG TTTGGGGATG TGGAAGGAGA TAAACAAGTT AATGTTTACG      300

TTGAATCCTT TACTTACTCA GATATTCTTA CAGAAAAGAA TTTGATTCAT TATCTTGACT      360

AAAGTGAGAA ATTTTCTCAC TTTTTCTTTT TTCTCCGAAT AATTTAGGTG AAGGCAATCA      420

TCGCTTTATA TTATTTTTCA AGGAGGAAGA ATGAAAATTT TACCGTTTAT AGCAAGAGGA      480

ACAAGTTATT ACTTGAAGAT GTCAGTTAAA AAGCTTGTTC CTTTTTTAGT AGTAGGATTG      540

ATGCTAGCAG CTGGTGATAG TGTCTATGCC TATTCCAGAG GAAATGGATC GATTGCGCGT      600

GGGGATGATT ATCCTGCTTA TTATAAAAAT GGGAGCCAGG AGATTGATCA GTGGCGCATG      660

TATTCTCGTC AGTGTACTTC TTTTGTAGCC TTTCGTTTGA GTAATGTCAA TGGTTTTGAA      720

ATTCCGGCAG CTTATGGAAA TGCGAATGAA TGGGGACATC GTGCTCGTCG GGAAGGTTAT      780

CGTGTAGATA ATACACCGAC GATTGGTTCC ATTACTTGGT CTACTGCAGG AACTTATGGT      840
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1249

```
CATGTTGCCT GGGTGTCAAA TGTAATGGGA GATCAGATTG AGATTGAGGA ATATAACTAT        900

GGTTATACAG AATCCTATAA TAAACGAGTT ATAAAAGCAA ACACGATGAC AGGATTTATT        960

CATTTTAAAG ATTTGGATGG TGGCAGTGTT GGGAATAGTC AATCCTCAAC TTCAACAGGC       1020

GGAACTCATT ATTTTAAGAC CAAGTCTGCT ATTAAAACTG AACCTCTAGC TAGCGGAACT       1080

GTGATTGATT ACTATTATCC TGGGGAGAAG GTTCATTATG ATCAGATACT TGAAAAAGAC       1140

GGCTATAAGT GGTTGAGTTA TACTGCCTAT AATGGAAGCT ATCGTTATGT TCAATTGGAG       1200

GCTGTGAATA AAAATCCTCT AGGTAAtTCT GTTCTTTCTT CAACAGGTGG AACTCATTAT       1260

TTTAAGACCA AGTCTGCTAT CAAAACTGAA CCCCTAGTTA GTGCAACTGT GATTGATTAC       1320

TATTATCCTG GAGAGAAGGT TCATTATGAT CAAATTCTCG AAAAAGACGG CTACAAGTGG       1380

TTGAGTTATA CGGCTTATAA CGGAAGTCGT CGCTATATAC AGCTAGAGGG AGTGACTTCT       1440

TCACAAAATT ATCAGAATCA ATCAGGAAAC ATCTCTAGCT ATG                         1483
```

(2) INFORMATION FOR SEQ ID NO: 231:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 1027 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 231:

```
CCCGGAAAAC AAGTTAAAGT TGAAGTTGGT CAAGCAGTTT ACGTTGAAAA ATTGAACGTT         60

GAAGCTGGTC AAGAAGTTAC TTTTAACGAA TTGTTCTTGT TGGTGGTGAA AACACTGTTG        120

TCGGAACTCC ACTTGTTGCT GGAGCTACTG TAGTTGGAAC TGTTGAAAAA CAAGGAAAAC        180

AAAAGAAAGT GGTTACTTAC AAGTACAAAC CTAAAAAAGG TAGCCACCGT AAACAAGGTC        240

ACCGTCAACC ATATACAAAA GTTGTCATCA ACGCAATCAA CGCTTAATTT TAAGGAGAAC        300

ACATGATACA GGCAGTCTTT GAGAGAGCCG AAGATGGCGA GCTGAGGAGT GCGGAAATTA        360

CTGGACACGC CGAGAGTGGC GAATACGGCT TAGATGTCGT GTGTGCATCG GTTTCTACGC        420

TTGCCATTAA CTTTATCAAT TCTATTGAGA AATTTGCAGG CTATGAACCA ATCCTAGAAT        480

TAAACGAAGA TGAAGGTGGC TATCTGATGG TTGAAATACC AAAAGATCTT CCTTCACACC        540

AGAGAGAAAT GACCCAGTTA TTCTTTGAAT CATTTTTCTT AGGTATGGCA AACTTATCGG        600

AGAACTATTC TGAGTTCGTC CAAACCAGAG TTATCACAGA AAACTAACAC GGAGGAAAAC        660

ATTATGTTAA AAATGACTCT TAACAACTTG CAACTTTTCG CCCACAAAAA AGGTGGAGGT        720
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                                          1250
TCTACATCAA ACGGACGTGA TTCACAAGCA AAACGTCTTG GAGCTAAAGC AGCTGACGGA        780

CAAACTGTAA CAGGTGGATC AATCCTTTAC CGTCAACGTG GTACACACAT CTATCCAGGT        840

GTAAACGTTG GTCGTGGTGG AGATGATACT TTGTTCGCTA AAGTTGAAGG CGTAGTACGC        900

TTTGAACGTA AAGGACGCGA TAAAAAACAA GTGTCTGTTT ACCCAATCGC TAAATAAAAA        960

GGTCCATTGA ACCTTTTATC CCGAACCTTG AAATGTAGAG GTGAGGAAGC TAGAAACAGC       1020

TTAAAAT                                                                 1027
```

(2) INFORMATION FOR SEQ ID NO: 232:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1990 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 232:

```
CGGTTCAAAT GGTGCAGGTA AATCTACGTT AATTAATTCT ATTGTAGGTT TTCAAGAGAT         60

TTATTTAGGA GAAATAGAGT ATTGTGATAA AGATTTGATA GTTAGTTCTC AACCTTTTGC        120

TCATTTAGGC TTTACTCCTC AAACCACAGT AATTGATTTT TATACTACTG TGAAGGACAA        180

TGTAATATTG GGGCTGAACC TTGCTGGAAA GTTTGGGAAA AATGCTGAGA AGTTGTGTCA        240

AATAGCCTTA GAAATTGTTG GGTTAGCTGA TAAAAAAAAT AATTTGGTAG AAACATTGTC        300

AGGTGGACAA CTGCAACGCG TCCAGATTGC TAGAGCAATA GCTCATAATC CAGATTTTTA        360

TATTTTAGAT GAACCTACCG TTGGTTTAGA TACTGAATCT GCCGAAAAAT TTTTAATGTA        420

TTTAAAAGAT AAGAGTTTGG AAGGAAAAAC TATTATCATA TCTTCACATG ACATAAATCT        480

ACTCGAAAAG TTTTGTAAAA AAATACTTTT TTTACAAAAT GGCTCCATAT CATTTTTTGG        540

TGATATGCGT GACTTTGTAG ATAATTCAAC TATCAAATTA AATTTTTCAA TGCAGAATAG        600

AATTTCTAGA TATCAAATTG AATTTTTAGA AAATTTTAGA TTTAAAGTTC ACATCGAAGA        660

TAATGATAGT TTTACAATAG AAGTCCCTAT AGAAGAAAAG ATCTTAGATG TTATCAATGA        720

GGTAGGAAAA GCATGTGAAA TTAAAAACTT TTCAACAAGT AAATTAACCT TACAAGAAAG        780

TTATTTGCAA AGAATAGGAG GAGAAAAATG AAGGCTGATC AATTAAGGCA CAAATCGGAC        840

TTAGGTTTAA GAGGTCTAGC GATTATTGCT AAAAATGAGA TTATTGCTTT TTTTAGAAGT        900

AAAGGTTTAA TTATTTCTCA GTTTCTACAA CCAATCTTAT ATGTTGTTTT TATAATAATA        960

GGATTAAATT CTTCGATAAA GAACATTCAG TTTAATGATA TAAAAACCTC TTATGCAGAA       1020

TATACAATCA TTGGTGTTAT AGCTTTATTG ATAATCGGGC AGATGACTCA AGTTATTTAT       1080
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1251

AGGGTGACAA TAGATAAAAA ATATGGGCTA CTTGCTCTTA AGTTATGCAG TGGAGTTCGT   1140

CCTTTATATT ATATTTTAGG GATGAGTATC TATTCTATAT TAGGGTTGAT AGTTCAAGAA   1200

ATTATTATAT ATATAATTAC GTTAGCGTTT GAGATAAATA TCGCAATGGA TAGATTTTTT   1260

TATACAGTTT TGTTATCTAT TGTTGTTTTA TTATTTTGGG ACTCCCTTGC AATTTTACTT   1320

ACAATGTTTA TCAATGATTA CAGAAGACGT GATATTGTAA TACGTTTTGT ACTAACACCG   1380

CTTGGTTTTA CAGCTCCTGT TTTCTACTTA ATAGATTCTG CTCCTAGTAT TGTGAGATGG   1440

ATTGGTCAGT TAAATCCCTT AACTTATCAA TTAACTATTT TGAGAAACTT TTATTTTAAA   1500

AATTCAACAA CTTTGGAATT AGTTTTCTTA TTGTTAACAT CATTACTTGT CCTTATATCT   1560

GTATCTTTTA TTATACCAAA GATAAAAATTG ATACTGATAG AAAGATAAAA GTTGGGTCAT   1620

CCAACTTTTT TGTTGTCTCC CGAAAACCAC TAGCTATGCT AGTGGTTCCA TAGAGCTTTT   1680

AGCGTGGTAA CAAAAAGAAC CTCCTAAAAT GATAAGATAG AAGTGGTTTC TCCGCCACTA   1740

CAACATATCA TACAGGAGGT ACCTCATGAG AGAGGATAAT CAAAGTTTAT CACATACCAC   1800

ATGGAATTGT AAATATCATA TTGTTTTTGC ACCCAAATAT CGTCGTCAAA TCATTTATGG   1860

CAGATACAAA GCTAGTATCG GAAGAATCAT ACGTGACTTA TGTGAGCGTA AGGGTGTAAT   1920

AATCCATGAA GCGAATGCTT GTTCAGACCA TATTCACATG CTTATCAGTA TTCCTCCGAA   1980

ACTTAGTGTT   1990

(2) INFORMATION FOR SEQ ID NO: 233:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 4766 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 233:

GAACTATATT GCATATATTT CTAGCAATGA TCATGGCGAA TCTTGGTCTG CACCAACTTT   60

ATTACCTCCT ATAATGGGAC TTAATCGGAA TGCGCCATAT TTAGGTCCTG GACGTGGAAT   120

CATTGAAAGC TCAACTGGAC GTATTCTTAT TCCGTCTTAC ACTGGTAAAG AGTCTGCGTT   180

CATTTATAGT GACGATAATG GAGCATCTTG GAAAGTTAAA GTAGTGCCAC TTCCTTCTAG   240

TTGGTCAGCA GAAGCACAAT TTGTAGAATT GAGTCCAGGA GTAATTCAAG CATATATGCG   300

TACAAATAAT GGTAAAATTG CATATTTAAC AAGTAAAGAC GCAGGTACTA CTTGGAGTGC   360

ACCGGAATAT TTGAAATTTG TTTCAAATCC AAGTTATGGA ACACAATTAT CAATCATCAA   420

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                                     1252
          TTATAGCCAA TTGATTGATG GTAAAAAGGC TGTCATTTTA AGTACTCCAA ACTCCACAAA          480

          TGGTCGTAAA CACGGACAAA TTTGGATTGG TCTAATTAAT GATGATAATA CAATTGATTG          540

          GCGTTATCAT CACGACGTTG ATTATAGTAA CTATGGATAC TCATATTCAA CATTGACAGA          600

          GTTACCAAAT CATGAAATTG GATTGATGTT TGAAAAATTT GATTCATGGT CTCGTAATGA          660

          ACTTCATATG AAAAATGTTG TACCATATAT AACATTTAAG ATTGAAGATC TGAAAAAGAA          720

          TTAAAGCTGA AATTTGAAAA TATATAAAAA GAGGATAAAA ATTATGGTAA ATTACGGTAT          780

          TGTTGGAGCT GGATATTTTG GAGCTGATTT AGCTCGCTCA ATGAACAAAA TTGAAGATGC          840

          AAAAGTGGTT GCGGTATTTG ACCCAAATCA TGGAGAAGAA GTTGCTCAAG AGTTGGGATC          900

          AGATGTTTGT GCAAGTTTAG ATGAACTTGT AGCACGTGAA GATATTGATT GTGTGATCGT          960

          AGCTTCACCT AGCTACCTTC ACCGTGAACC AGTTGTGAAA GCTGCTCAAC ATGGCAAACA         1020

          CGTATTTTGT GAAAAGCCAA TTGCATTGTC TTATGAAGAT TGTAAAGCCA TGGTTGACGC         1080

          ATGTAAAGAA AATAATGTCA TCTTTATGGC TGGTCACATC ATGAACTTCT TTAACGGTGT         1140

          ACACCATGCT AAAGAATTGA TTACTCAAGG TAAAATCGGT AAAGTTCTTT ATTGCCATGC         1200

          TGCTCGTACA GGTTGGGAAG AACAACAACC AACTGTATCA TGGAAGAAAC TTCGTTCTCA         1260

          ATCTGGAGGA CATTTGTACC ACCATATTCA TGAATTAGAT TGCATTCAGT TTATCATGGG         1320

          AGGACTTCCT GAAAAAGCGA CAATGGTAGG AGGCAATGTA TATCATAAAG GTGAAAACTT         1380

          TGGTGATGAA GATGATATGC TCATTGTAAA CTTAGAATAC TCTGATGATC GTTATGCTGT         1440

          TTTGGAATAT GGTAATGCTT TCCGTTGGGG TGAACACTAC GTCTTGATTC AAGGAACTGA         1500

          AGGAGCTATC AAACTTGACT TGTTCAATAC TGGCGGTACT CTTCGTGTTA AAGGTGAAGG         1560

          AGAATCACAC TTCTTAGTTC ATGAAACTCA AGAGGAAGAT GATGATCGTA CAGCTATCTA         1620

          TACCGGTCGT GGTATGGATG GAGCAATTGC GTACGGTAAA CCAGGAGTAC GTTGCCCATT         1680

          ATGGTTGCAA ACATGTATTG ATAAAGAAAT GGAATATCTA CATGACATCA TTAAAGGTGG         1740

          AGAAATTACA GAAGAATTTG AAAAACTTCT CAATGGTGTA GCTGCTTTAG AATCAATCGC         1800

          TACCGCTGAT GCATGTACTT TATCAGTTAA AGAAGATCGA AAAGTAAGTC TTTCAGAAAT         1860

          CACAAATGCT TAACTTTTGT AAAACAGAAT AGTAAATTCT TGTCATTATA TAATTTCTAA         1920

          AGTTCTGTGA TACAACTCAT TGAATAAAGA AATAGAGATG GGACTGGGAT AATGCCCAGT         1980

          CCCATTTTTT ATCAAAAAGT AATGAGATCA AAAATGTGGG AGTGTTGAAA TGAAGATTAT         2040

          AGGTATCGAT ATTGGCGGAA CAACAATTAA GGCAGATTTA TACGATGAGT TTGGAACGAG         2100

          TTTGAATCAT TTCAAAGAGA TAGAAACAAT TATTGACTAT GATTTGGGAA CGAATCAGAT         2160

          ATTAAATCAG GTCTGTGATT TAATTGGTGA GTATACTTTA AATCATTCAA TTGATGGTGT         2220
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1253

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TGGGATTTCC ACTGCTGGAG TTGTTAATGC TAATACTGGA GAAATCATCT ATGCAGGCTA    2280

TACAATACCA GGGTATATCG GAGTAAACTT TACTGCCGAA ATAGAAAAAC GTTTTGGGTT    2340

GTATACTTTT GTTGAAAATG ATGTTAATTG TGCTGCATTA GGTGAATTGT GGAAGGGACA    2400

AGCCAAAGAT AAGAAAAATG TAGTAATGGT TACTATTGGA ACAGGTATAG GAGGCAGTAT    2460

TATTGTCAAC GGACAAATTG TTAACGGATT TAACTATACT GCTGGTGAAG TAGGTTATAT    2520

TCCTGTAGGT AATTCGGATT GGCAAAGTAA AGCCTCAACA ACCGCATTGA TTCATTTATA    2580

TCAAAAAAAG AGCTTGAAAA CTAATCAAAC TGGACGTACT TTCTTCACTG ATTTAAGATC    2640

TGGAGATAAA GTTGCTGAAG AAACTTTTGA AATTTTTGTA GAAAATCTAA CAAAAGGTTT    2700

ATTAACGATT TCTTATCTAC TTAATCCAGA AATTCTCATA TTAGGAGGTG GGATTCTGGA    2760

TAGTAAGGAT ATTTTGTTAC CTGAAATTCA AAGTTCTTTA GCTAAAAATG CAATGGATAA    2820

TAGGTTTTTA CCTAAAAATC TTGTGGCAGC TACATTAGGA AATGAAGCTG GTCGTATAGG    2880

AGCTGTAAAA AATTTCTTAG ATAGAATTTC TAATAAATAG TATGTAAGAT AAGGAGGTGT    2940

CACAATGACT AACTCTGTAT TTTCGACAAT GCAAGATATT GAGAATGTTG CAACCGATAT    3000

TATAAAATCA TATGATAATG AGATTTATAC TTATAAAGCT GTTTCCCAAG AAGAATTGGA    3060

AAAACTAGAA AAAAGTTATG ATGAAAAAAG TCACGAAGAA TTAGTTTCAA TAGAAAGCAA    3120

TTTAGAAATG AAACAACAGA ACCTTATTGA TCACCTTAAT AAAACAATCA AGGAAAATGA    3180

TGCAAATATT CAGTATATTT CATCAAGTAG GAGAGGAGAA TTTGTAGAAA AAATTATTGG    3240

TAGGGTGGTA GAAAAATATG GCCATTAGTC AGATGAAAAG AATCTCTCTA CTATTTTCTA    3300

AAAGTAGTCT TGATGATGTT TTAAAAACTA TTCAAGAACT AGAGTCAGTG CAGTTCCGTG    3360

ATTTAAAGGT TCAGGATAAC TGGTCAGAAG CTCTAGAAAA AGATGAAGTT GTATTTCCAA    3420

CTATTCAAAT TTTTCATACT TCTAATTCCA ATCATGGGGT TATTGAGGGA AATGATGCCT    3480

TGACTTATTT GATGAATCAA CAACAACATT TAGAAGCAAC TGTAGAGAAA TTACAAGAAT    3540

ACCTACCGAA AGAAAACACG TTTAAATTAT TGCAGCAACC TCCGATAACT ACCTCTTATG    3600

AAGAATTAGA GAAATTTGGT AAAGCTAATG TTGCTGAGGG TGTTCTTAAA AAAGTGAATC    3660

ATCAAATTAA CAGAGTTCAT GAATTAGAAA GACACATTCA AAGTAATAAT GAGGAAATAG    3720

AGCGATTAAT AAAGTGGGAA AAATTAGAAA TTGTTCCTGC GAATTTAGAA CAATTTTCTT    3780

TCTGTAAAGG AAAAGTCGGA ACAATTCCAA GGACTGAAGA TAATCGCTTA TACAATAGTC    3840

TTTTAGAAAA CAATATTGAA GTTCAAGAAA TATTTTCTAA TGATAGAGAG TACGGTGTTG    3900

TTGTTTTCTA TCAGTCTAGT TACTCTATAG ATTTTGATGA ATACTTATTT GAACCATTTG    3960
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1254

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ATTATTCTAG AAAGGAATTA CCGAAGCAGC GAGTAGTAGA TTTAGATCAA GAAAACATGC      4020

AGTTAATAAC TGAAAAAGAG AATATTATCG CATCGTTGCA AGATTCAAAG AAATATTTGA      4080

TAGATTTACA ATGGCAAATA GACTATATTT TATCTATCTA TGCTCGTCAA ATCTCTAAGA      4140

ATAACTTTTT GTGCACTCCG CATCTAGTTG CATTAGAAGG ATGGATAGAA GAAACTCGTA      4200

TTTTATATTT TATAAAAGTT ATGGATGAGC ATTTTGGACA TTCTATTTAT ATTTATGAAT      4260

CGGAAACATT GACGGATAAT CAAGATGAAA TACCTATCAA ATTAACGAAT CATTCTTTAA      4320

TTGAACCATT TGAATTATTG ACAGAAATGT ATGCTCTGCC CAAATATTAT GAGAAAGATC      4380

CTACACCTGT ATTAGCACCA TTTTACTTTA CATTTTTTGG AATGATGGTT GCTGATTTAG      4440

GCTATGGTTT ACTATTGTTT TTAGGAACAA TGTTAGCATT AAAAATTTTT CATCTACCTT      4500

CAGCAACTAA GAGATTTTTA AAATTCTTTA ATATATTAGG GGTAGCCGTT GCAATTTGGG      4560

GTGGAATCTA TGGCTCATTT TTTGGATATG AGTTGCCATT TCATCTGATA TCTACAACCT      4620

CTGATGTCAT GACTATATTA GTAGTGTCAG TTGTGTTTGG GTTTATTACA GTATTTGCAG      4680

GTTTGTTAGC TTCAGGACTA CAAAAAGTAA GAATGAATAA ATATGCAGAA GCATATAATT      4740

CAGGATTTGC GTGGTGTGTT ATTCTG                                          4766
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(2) INFORMATION FOR SEQ ID NO: 234:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 2484 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 234:

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CCTTTTAGAA AAAATTAAAG AATACGACAC CATTATCATT CATCGTCATA TGAAACCAGA        60

CCCTGATGCC TTGGGAAGTC AGGTGGGATT GAAAGCCTTG CTGGAACATC ATTTCCCAGA       120

AAAAACCATC AAAGCCGTCG GTTTTGATGA ACCAACTCTT ACTTGGATGG CTGAGATGGA       180

TCTTGTTGAA GATAGAGCCT ACCAAGGCGC ACTTGTCATC GTCTGTGATA CAGCTAATAC       240

TGCTCGTATC GATGATAAGC GCTATAGTCA AGGTGATTTT CTCATTAAGA TTGACCACCA       300

TCCAAATGAT GATGTATACG GTGACCTGTC TTGGGTCGAT ACTAGTTCAA GTAGCGCTAg       360

aGaTGATTAC CCTATTTGCC CAAACAACCC AACTAGCCTT GGCAGATCGC GATGCTGAGT       420

TGCTCTTTGC AGGAATTGTC GGTGATACAG GTCGCTTCCT CTACCCTTCT ACCACTGCAC       480

GGACTCTTCG CCTGGCTGCT TATTTGAGAG AACATAACTT TGACTTTGCG GCTCTCACTC       540

GCAAAATGGA CACTATGAGC TACAAAATTG CTAAACTGCA AGGCTACATC TACGACCATC       600
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1255

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TGGAAGTGGA TGAAAATGGT GCTGCTCGCG TTATCCTGAG TCAGAAAATC TTGAAACAAT        660

ACAATATAAC CGATGCTGAA ACTGCGGCCA TTGTAGGTGC ACCTGGACGC ATTGACAGAG        720

TGAGTCTCTG GGGAATTTTT GTCGAACAGG CTGATGGCCA CTACCGAGTT CGCTTACGCA        780

GTAAAGTCCA TCCTATCAAT GAAATTGCCA AGGAGCATGA TGGTGGAGGC CACCCTCTAG        840

CAAGTGGTGC TAATTCCTAT AGCCTAGAAG AAAACGAAAT CATCTACCAA AAGTTAGAAG        900

ACTTGCTTAA AAACTGATAA AATACTTGCC AAACTTTTCA GAATCTGATA GACTAGTATA        960

GTAACAATCT ATGGCTCGCA AAGAGACCAT GGCAGAAAGG AAATATTGCA AAATGAAAAr       1020

AGATATCCAT CCAGAATATC GCCCAGTTGT CTTCATGGAC ACAACTACTG GTTACCArTT       1080

CCTTAGCGGT TCAACAAAAC GCTCTAACGA AACAGTTGAG TTCGAAGGCG AAACTTACCC       1140

ATTGATCCGT GTGGAAATTT CATCAGACTC ACACCCATTC TACACTGGAC GTCAAAAGTT       1200

CACTCAAGCA GATGGACGCG TGGATCGTTT CAACAAAAAA TACGGTCTCA AATAATGATA       1260

AGAGAACAGT TTTGGCTGTT CTTTTTTGTT TCTTGAAATC AACTGCTGTT TTCATGTTCC       1320

AGACTCATCT GTAGGTTCGA TTTCCATGCT ACTAGGCAGG AAGGAAATAG CTGTTTCAAC       1380

ACGTCCATAA TGAGCTATAC TATTGTCACG AACCACACTT TCATTGATGG TCCAAGTGGA       1440

ATTCATTTTC TTAAAAGCTT CTCGGACTTT TTCCAAATCT TTGGAGGCAA TGGCCTGCTC       1500

TAAGGTTTCA AAACGAGGAC TTATACTCAT CTGCTTTCAA AAAGCATTCT AGTCCATCTC       1560

CGATTACCGA TGGACTTTAT CACCTCCTTC TCCAGTCCTT GTATGACATC TTGAAGTTGA       1620

TTCATGACAT CTTCCAAAGT TCgAAAGGCT TTATTCTTAA ATCCACGTTT ACGAATCTCT       1680

TTCCACACTT GTTCAATGGG TTCATCTCTG GTGTGTATGG AGGAATAAAG GTAAAATCAA       1740

TATTAGTCGG AATATTTAAG GTACTTGATT TATGCCATAT AGCATTGTCC ATAACGAGTA       1800

AAAGGATAAG CTTGTGAAAG CTCTTCTAAA AAGGCGTTCA TCCACACTCC TTTTTATAAA       1860

CCTGAAATAA GGCATCAATT GTAACAAATT CTCCTGCCTC TGTAGCCTTC AAATGACGGG       1920

CAAGAAAGGC TTTCTCTTCC TCAACTGTCA TATATGCATG GTTACGACCA CCACGTGTTT       1980

CTTGAAGGAG AGAGTCGAGT CCGAACTCCT CATATTTTTT TACGTTTCGC CAAATCGTTG       2040

TTTGATTACA GTCTAAAAGC TCTATAATCT CTTTATAAGA TTTGCCCATC AGACGAAATA       2100

TAGTAGATTG AAACTAGAAT AGTACACCTC TACTTCTAAA ACATTGTTAG AAATCGATTT       2160

GTCCTGTTCT TGTTTCATTT TACTATAGAA CGATTTGAAG GCGTTTATAA TATTTAGCTG       2220

TACGAGAGTC TTTTAAAAGT GTTTTGATGG TTTGGATTTC TTCTTTAGTT GATTTCATAT       2280

TACTATTATA TAATGCTTTT TGATTTTAGT CTGGTATAAA TATTGCTTTC CTCCAAAATG       2340
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1256

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GTCATAGTTT TACTGGCAAA TCTAACATAT CACGGATAAA TTAACAAGTG ATTTCTGAAT      2400

TGCTAAACAT TTTCTTTTCT TATAGCATAC TTTAAGATTT TGTCTTTGAG AAAGATATTT      2460

CCAAGAAAAA CGTTCGTTTT TTGG                                             2484
```

(2) INFORMATION FOR SEQ ID NO: 235:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1766 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 235:

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CTAGATATAG CTATAATTTT ATTTATAACA AGAGGATAGA AATGACCGAA TTAGAAAGAA        60

AAAATCGAAA AATTAGCTAA GAAATATTCT GATAACTTAA ACATCAAAGT TCAAGAGAGA       120

GTTCGTGAAA TGGCAAATGA TAATAAGAGC CATTATTTGA TATACAGAGT TTTAGGTATT       180

TCATTTGAAG AAGGAGAAAA TATCGATTTG TATCAAAATA AAGGTCGTTT TTTATACAAA       240

TATGCTGGTT CATTTTTAGA AGAAGCTGCA GTACTATGCT TTAACGAAAA ATTTGGTACA       300

GAAAATACTT AAAAAGTTAA CATTCCTAAT TCTGAAAGTA CAAAACCTAA GACTTTTGAA       360

ATTGATTGTT TAGTCGGAGA AAAACACGCA TACGAAATAA AATGGTGGGA TGCAACTACA       420

GATGGAGACC ATATAACTAA AGAACACACT AGAATAAAAG TTATTCATAA CAAAGGATAT       480

ATACCAATTC GGTTAATGTT CTACTATCCA AATAGAACTC AAGCTATAAA AATTCAGCAA       540

ACTTTAGAAA CATTGTATAA CGGTATTGGA GGGAAATATT ATTATGGAGA TTCTGCCTGG       600

GAACATTTAA GAGCAGTGAC CGGTATTGAT TTACTTAGTA TTCTAACAGA TATTGCAAAT       660

AAAAAAACAG GGGTAAAATC AAAATGACAG TATTAAAAGG AGATAACTTA GAAATATTAA       720

AAACTATTGA ATCCTCAAGT ATTGATTTAA TCTATATGGA CCCTCCTTTC TTTACACAGA       780

AAACCCAAAA ATTATCTAAT AACAAAAATA TTATGTATTC ATTCGAAGAT ACGTGGACTT       840

CGATTGAGGA TTACAAAGAA TTTTTGTCTG TAAGATTAGA AGAATGCAAA AGAGTGCTAA       900

AAAATAGTGG CAGTATTTTC GTTCATTGTG ATAAAATTGC AAATCATCAT ATTAGATTAA       960

TTTTAGATAA TATCTTTGGA GTAGATATGT TTCAAAGCGA AATTATATGG AACTATAAAC      1020

GGTGGTCTAA TTCAAAAAAG GGATTATTGA ACAATCATCA AAACATTTAC TTTTATTCAA      1080

AGTCAAAGA TTTTAAATTT AATACAATTT TTACAGAGTA TTCTTCTACT ACAAATATCG      1140

ACCAAATACT AGTGGAACGA AAACGAGATG GAAACTCTAA AACTATATAT AAGGTTGATA      1200

ATAATGGTAA CTATATTCTA GCAAAAGAGA AAAATGGAGT TCCCCTTTCA GATGTTTGGA      1260
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1257

ATATACCATT TCTTAATCCA AAAGCTAAAG AAAGAGTAGG TTATCCTACA CAAAAACCTA   1320

TTCTGTTATT AGAACAAATT ATAAAGATTG CTACTGATAA AAATGATATA GTTTTAGACC   1380

CGTTCTGTGG AAGTGGAACT ACTTTAGTAG CCTCCAAGAT TTTGAATAGA AATTATATGG   1440

GGATTGATTT ATCTGAGGAA GCTATCAATA TAACTCAGCA ACGTCTGGAA AATGTTATAA   1500

AAACAAGTTC AAATTTATTG AATAAAGGAA TCGAAGCATA TAGAACCAAA ACTGAGGAAG   1560

AGGAAAACAT TCTTAAATTA TTACAGGCAA AAATTGTTCA AAGAAATAAA GGAATTGATG   1620

GTTTTTTACC TAAACATTTT CAAAAAAAAC CGATACCTAT AAAAATTCAA AAAAATAATG   1680

AATGTCTGAA TGAGAGTATC TCTTTATTAC AGAATGCTAT AAACTCCAAA AAACTTGATT   1740

TTGGAGTAGT TATAAAAACT CATTCG   1766

(2) INFORMATION FOR SEQ ID NO: 236:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 748 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 236:

CCGAAAATCA AATTCAAACC ACGTCAACGT CGCCTTGCCG TACTCAAGTA CAGCCTCCCG   60

CTAGTTTCCT AGTTTGCTCT TTGATTTTCA TTGAGTATTA AACTAAATTA AATAATATTA   120

GCGCGGAGAA TTTCTAATTC TTCCTTGGTC AAGCGACGCC ATTCCCCTCG TTCTAGGTTC   180

TCATCTAATA CTAAAGTTCC CATAGTCAAT CGTTGCAAGT CCACCACTTC CTTGCCACAG   240

TAGCCCACCA TACGCTTGAT CTGATGAAAC TTCCCTTCTG CAATGGTCAC ACGGATTTGG   300

CTTTGATTCT TTTCTGTATC TATGGATACA AGCTCCAGTA TAGCGGGTTG ACAGGTAAAG   360

TCTTTGAGAG GAATACCCTC AGCAAATGTC TCCACATCTT CTTGGGTCAT GATTCCCTTG   420

ACTTGTGCCA GATAAGTCTT GTCCACATGA CGCTTGGGCG AAAGAAGAAC ATGAGCCAGC   480

TGACCATCAT TGGTCAAGAG CAAAAGACCA TGCGTGTCAA TATCCAAGCG TCCTACTGGG   540

AAAACTTCCT TACTCCGCGC CAAGTCATCC AACAAGTCCA GAACGGTTCT GTGCTTGGGA   600

TCCTCAGTCG CTGAGATAAC TCCTTTGGGC TTGTTCATCA TGTAGTAGAC AAACTCTTCA   660

TACTCCAACA CTTGCCCATC AAAGCGAATC TCATCTATTT TTTCATCAAT CTGCAATTTA   720

GCTGATTTTT CTTTTTGACC ATTTACAG   748

(2) INFORMATION FOR SEQ ID NO: 237:

1259

(2) INFORMATION FOR SEQ ID NO: 238:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 904 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 238:

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TACCCGCTTC TTTCAAGAGT TGGAGCAGGG CTTGTTTGCG ATCTTTTGTC ATAGTTCTTC      60

CTTTTAACGG CGTTTTCGAA GCACTTTATA GACAGCTAGT GCTAATGTAT AGTCTACCAT     120

ACTATGGATA ATTGTACCAA ATCCAACTAG TACAAATAGA ACATAAAACA TATTTTCTAC     180

ATTGGTACCA GAAGTTGCGT AAAAAACGAC ACAGGCCAAT ACTTCAGCAA GGGCATGAAC     240

AACAGCCAAA ACAAAGTTGA AAATCCAGGA AGATTTTGGT TTATCTAGGG TATCGGGGAA     300

TTTTTGTAGG TAAAGAGCTC CTAAAGCACC AAAAGATATA TGGGAAAAAG CCCGAAAAAC     360

GATAACCATG GGATAGCCAG CCATCAAAAA TCCAAAACTA GAGGCTAGGA TGACAAAAAC     420

TGCCATCAAG GGCGACAAGA ACATGGCTAT AAAAATAGCG ATGTGGCTCC CCAAAGTATA     480

GGAAGCAGGT GGAATGACAA TCTTGAAAGG CATAACAATT GGAATCAAAA TCGCAATAGC     540

CGTTAAAAGG GCTGTCATTG TCATAAATTG TGTCTTTTTC CGTGTATTCA CAAGAATCTC     600

CTTTTTAACT GCATATACAC TAGTATGGTA CAATAAACCA GACAATAAAG CAAGAATTTA     660

CTTGGGTTTA TAGATCATTT TTTAGTTAAA AGTTATAGTA GATTGAAACT AGAATAGTCC     720

ACCTCTACTT CTAAAACATT GTTAGAAATC GATTTGGCTG TCCTGATCGA TTTGTCCTGT     780

TCTTATTTCG TTTTACTATA GTAAAGATTT CATTAAAAAG AAACTGTATA GAGCAAAATC     840

TCCACCTTCA GGTTTGGAAA GCGGAGATTG TTTnTTATTT TTTCCAGGGT TTGTAGTCGT     900

GGGA                                                                 904
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(2) INFORMATION FOR SEQ ID NO: 239:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 946 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 239:

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CACTCAAACA TGACTTATAT CAAGACGGAT GGACTTCAAG ACGATGCCAA TCGCTTGAAT      60
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1260

CGTAACATTC	AGTTTGGTGT	TCGTGAATTT	GCAATGGGAA	CAATCTTGAA	CGGGATGGCC	120
CTTCATGGTG	GACtTCGTGT	ATACGGTGGA	ACTTTCTTCG	TCTTCTCTGA	CTATGTGAAG	180
GCAGCTGTCC	GCTTGTCAGC	CTTACAAGGA	CTTCCTGTGA	CTTATGTCTT	TACCCATGAT	240
TCAATCGCAG	TTGGGGAAGA	TGGTCCGACT	CATGAACCAG	TTGAGCATTT	AGCAGGTCTT	300
CGTGCTATGC	CAAATCTAAA	TGTTTTCCGT	CCAGCAGATG	CGCGTGAAAC	GCAAGCAGCT	360
TGGTACCTTG	CAGTGACAAG	TGAGAAAACA	CCAACTGCCC	TTGTCTTGAC	ACGTCAAAAT	420
TTGACTGTTG	AAGATGGAAC	AGACTTCGAC	AAGGTTGCTA	AAGGTGCTTA	TGTTGTATAT	480
GAAAATGCAG	CCGACTTTGA	TACCATCTTG	ATTGCGACAG	GTTCAGAGGT	TAATCTTGCT	540
GTCTCAGCTG	CTAAAGAATT	GGCTAGTCAA	GGCGAAAAAA	TCCGCGTAGT	CAGCATGCCA	600
TCTACAGATG	TCTTTGATAA	ACAAGATGCA	GCTTACAAGG	AAGAAATTCT	TCCAAATGCA	660
GTCCGCCGTC	GTGTTGCAGT	CGAAATGGGT	GCAAGTCAAA	ACTGGTACAA	ATATGTTGGT	720
CTCGATGGTG	CCGTTCTAGG	TATTGATACT	TCGGAGCCTC	TGCCCCAGCA	CCAAAAGTAT	780
TGGCAGAATA	TGGCTTTACT	GTAGAAAATC	TTGTAAAAGT	TGTTCGAAAC	TTGAAATAAT	840
CCTAAAAATC	AGGGCGTAAG	CTCTGGTTTT	TCTTACCAGA	AAAGTAAGGT	ACAATCTTGT	900
AAAAGTAGCT	GAAATTTGAT	ATAGTAGTCC	TATGTAAAAG	ACAAAG		946

(2) INFORMATION FOR SEQ ID NO: 240:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2764 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 240:

CGGGGCTCCc	TAGTTCTTAG	GGAGCTATTT	TTGTTTTTTC	AAGAAGTTAT	CTTCTTGTAT	60
TTTATACTCA	ATGAAAATCA	AAGAGCAAGC	TAGGAAACTA	GCCGTAssTG	CTCAAAACAC	120
TGTTTTGAGG	TTGTAGATAA	GACTGACAAA	GTCAGGAACA	CATATCTACG	GCAAGGCGAC	180
GTTGACGCGG	TTTGAAGAGA	TTTTCGAAGA	GTATTAGTTG	TGAATCTGGT	GCAGTCGTCC	240
CAGATTATTC	TTATTAGTAG	GGTCTTGTTT	TCTATATCCC	CTCGTAGTTA	ACAAGACCTT	300
GAGCATTTTA	GAAAGAGGAA	TCTATGTCTA	CGAAATATAT	TTTTGTAACT	GGTGGTGTGG	360
TATCGTCCAT	TGGGAAAGGG	ATTGTGGCAG	CGAGTCTAGG	CCGTCTCTTG	AAAAATCGTG	420
GTCTCAAAGT	AACCATTCAA	AAGTTTGACC	CTTATATCAA	TATTGATCCG	GGAACCATGA	480
GTCCTTACCA	GCACGGGGAA	GTTTTTGTGA	CAGATGACGG	AGCTGAGACA	GATTTGGACT	540

1261

TGGGTCACTA TGAACGTTTC ATCGATATCA ATCTCAACAA ATATTCCAAC GTGACAACTG   600

GGAAAATTTA CAGTGAAGTT CTTCGTAAAG AACGCCGTGG AGAATACCTT GGGGCAACTG   660

TTCAAGTCAT TCCTCATATC ACAGATGCTT TGAAAGAAAA AATCAAGCGT GCCGCTCTAA   720

CGACCGACTC TGATGTCATT ATCACAGAGG TTGGTGGAAC AGTAGGAGAT ATCGAGTCCT   780

TGCCATTCCT AGAGGCTCTT CGTCAGATGA AGGCAGATGT GGGTGCGGAT AATGTCATGT   840

ATATCCATAC AACCTTGCTT CCTTACCTCA AGGCTGCTGG TGAAATGAAA ACCAAACCAA   900

CCCAACACTC TGTCAAAGAA TTGCGTGGCT TGGGAATCCA ACCAAATATG TTGGTTATTC   960

GTACAGAAGA GCCAGCTGGT CAAGGAATTA AAAATAAACT GGCCCAGTTC TGTGATGTGG   1020

CACCAGAAGC CGTTATCGAA TCGTTGGATG TTGAACACCT TTACCAAATT CCACTGAACT   1080

TGCAGGCACA AGGGATGGAC CAAATTGTTT GTGATCATTT GAAATTAGAC GCACCAGCAG   1140

CGGATATGAC AGAATGGTCA GCCATGGTGG ACAAGGTCAT GAACCTCAAG AAACAAGTTA   1200

AGATTTCCCT TGTTGGTAAG TATGTGGAGT TGCAAGATGC CTATATCTCA GTGGTCGAAG   1260

CCTTGAAACA CTCTGGCTAT GTCAATGATG CAGAAGTTAA AATCAATTGG GTCAATGCCA   1320

ATGATGTGAC AGCAGAGAAT GTAGCAGAAC TCTTGTCTGA TGCGGACGGG ATCATCGTAC   1380

CAGGTGGTTT TGGTCAACGT GGTACAGAAG GGAAAATCCA AGCCATCCGC TATGCGCGTG   1440

AAAATGATGT TCCAATGTTG GGAGTCTGCT TGGGAATGCA GTTGACATGT ATCGAGTTTG   1500

CTCGTCACGT TTTAGGTCTT GAAGGTGCCA ATTCTGCAGA GCTTGCACCA GAAACAAAAT   1560

ACCCTATCAT TGATATCATG CGTGATCAGA TTGATATTGA GGATATGGGT GGAACCCTTC   1620

GTTTGGGACT TTATCCGTCT AAGTTGAAAC GTGGCTCTAA GGCTGCTGCT GCTTATACACA 1680

ATCAAGAAGT GGTGCAACGC CGTCACCGTC ACCGTTATGA GTTTAATAAT GCCTTCCGTG   1740

AGCAGTTTGA GGCAGCAGGT TTTGTCTTTT CAGGAGTTTC TCCAGACAAT CGTTTGGTAG   1800

AAATCGTGGA AATTCCTGAA AATAAATTCT TTGTAGCTTG TCAGTATCAC CCTGAACTGT   1860

CAAGCCGTCC AAACCGACCA GAAGAACTCT ACACTGCCTT TGTTACTGCA GCAGTTGAGA   1920

ACAGCAATTA GCAAAATCAG AACCTTTGAG AAAAATCTCA GAGGTTTTTT GCATACGATG   1980

ATATTGCAGT ATATCTGAGG TAGGGGTCCT CTGTATGTAC CTGCTACCGT TGAAATCAAT   2040

AGCGACTCCC TCTTGCCCTG TGCTAGTGAA TGGATTTATC AGTATATTGA AATGAAATAA   2100

AATTTGAACA AATTAATTCG GAAAGCCAAA TCAATTTCTA GCAAAGTTTT AGGAACTGGA   2160

TTGTATAGTG AATTGAAATA AGATGTGAAC ATCTCTATCA GGAAAGTCAA ATTAATTTAT   2220

AGAAATATTT TAGCAGTCAA GATGTACTGT TATAGATTCA ATACATTATA CTTTTTTAAT   2280

1262

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TTAATCCACT ATAGTAAAAT GAAATAATAA CAGGACAAAT CGATCAGGAC AGTCAAATCG          2340

ATTTCTAACA ATGTTTTAGA AATAGAGGTG TACTATTCTA GTTTCAATAT ACTATCCCAA          2400

ATCATTCATA CCTCTCTCAA CTAGATGTAA CTTACAAAAC CCCTGACCTC ATGAGCCACT          2460

TTCTTCCTCC TCATGAGGTC AGTTTTACTT TCTGCTGTTC CAGTATCGTT TTTCCTCGCT          2520

AGATTTCCTC AAAAGGGCAG ACTCCTCCCT TGGTGCGTCA CACGATTTTT TCATCTCGAC          2580

TGTTCTTTAA TGCATCATTA ACGACGCTTT TCTTCTAGGT GGTTCATAAG GAACAGGAAG          2640

ATTCAGGTTG ACTTTTCTAA TCCTAGAATA AAGTGCTGAA AACAATTCGG AATAGGCATA          2700

GAGACTAGAC AATTTGAGGA GCTGCTTGCG TCCTGTTCGA ACACATTTTC CCACCACGTG          2760

AAGA                                                                       2764
```

(2) INFORMATION FOR SEQ ID NO: 241:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1682 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 241:

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CCGTTTTTTT CATTGTTCAG TACTACAACT TACGTTGTAG CGCCCTGCAC ATTGGTTCGT            60

CTTGTTCAGT TTTCAAAGGT CTTTGTCACT TGCTTCTCTC AAGCGACAAC TATATTAGTA           120

TATCACAACT GCTTTCGCTT GTCAACACTT TTTTGAAGAT TTTTAAGTTT TTTTAAACTT          ·180

TTTTTCATCA AGTGGTCCTG ACGCAACATA CCATAGTCCG TACGGGATTC GAACCCGTGT           240

TACCGCCGTG AAAAGGCGGT GTCTTAACCC CTTGACCAAC GGACCTGAGT TGTTATTTTC           300

AACTCTTACT ATTATACAGT CTTTTCAAAC TTTGTCAACT ACTTTTTTAA ACTTTTTTTA           360

TTAATTTTAC AACAGCTTCA GTTCGAGCTG TATGTGGGAA CATATCGACC GACTGGATAT           420

AATGAAGATC ATAGACTTCT ACTAAGCGTA CCAAATCACG AGCCAAGGTC GAAACATTAC           480

AAGAAATATA AACCATTTTT TCTGGTACAT AAGTAAGAAT AGTATCTAAT AACTTATCAT           540

CCAGACCTGT ACGTGGTGGG TCAACAATCA AAGCATCTGC TCGGTAGCCT TCCTTGTACC           600

AACGAGGAAT AATCTCTTCT GCCGTTCCAG CTTCATAATG AGTATTGTCA AATCCCATTC           660

TTTTAGCATT TCGCTTGGCA TCTTCAATAG CTTCTGGAAT AATATCCATA CCTCTGAGTG           720

TTTTTACTTT CTTTGCAAAG GCAAATCCAA TCGTTCCAAC TCCACAATAA GCGTCAATCA           780

AATGGTCTTC TTTATCAACA TCCAGCGCTT TTACTGCTTC GCTATAGAGG ACTTCTGTTT           840

GCTCAGGATT TAGTTGATAA AAAGCTCGAG GGGATAGTGA AAATTCATAA TTGAGTACAC           900
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1263

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CTTCTTGAAT ACTCTCTTGC CCCCAGATAA TCTCTGTCTT TTCACCATAT ATCTCACTGG        960

TTTTAGCTGT ATTTGTATTA ACAGCTACTG TCACAACTTC TGGGAAATCT TTAACCAACT       1020

CTTTTACCAA TTGAGTTAAA TTAAGCTGGC GGTTTGTAAC AATAATAATC TGAACCTGTC       1080

CGGTCTTTCT CGCGCGTCGG ACCATAATAG TACGGACACC TAGAACTTTT CTCTCATCCG       1140

TGATTGGAAT CTGGTGATAA GTAAGTAATT CTGCTAAGCG ATTAGCAATC ACTTGGGTTT       1200

CCTTATCTTG TACCAGGCAG TCTTTCAACT CTACTAAATA GTGAGAGTTT TGTGCATATA       1260

AGCCCGCCTT GACCTGATTT TTAAATTTTC GAGTCTGAAA TTGTAACTTA GCTCTGTAAT       1320

ATTTTGGTTC CTGCATTCCA ATAGTTGGAC GAATTTCATA ATTTTCATAT CCTGCAGGAG       1380

CAAATTTTTT CAGCGCTTGA TGAAGTAAGT CCGTCTTGAA CTCCAGCTGC TTATCATAAT       1440

GCAGGTGCAT GATTTGGCAG CCTCCGCATT CATTATAAAT AGTACAAGAT GGCACAATTC       1500

GAAATTTAGA CTTCTTGTTG ACCTTCAGTA ATTTTGCTTC AACAAAGTTG CGTCTAATAG       1560

AAGTAATCTG ACAATAGATA TCTTCGCCTT TGAGAGCTCC TGGTACAAAG ACTAATGTTT       1620

TTTGGTAAAA GCCGATTCCC TCACCGTTAA TTCCCATGCG CTTGATTTTT AATGGTATTT       1680

TT                                                                     1682
```

(2) INFORMATION FOR SEQ ID NO: 242:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2524 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 242:

```
TTAACTTTGG TCAATTCTTT AAAGTCATCC TCTGTAAGCA TGTCTAACCA TTGATGTTTC         60

CCTTTATTGC TAAAATCACC AATTCCGACT ACAGCTATAT CTAAATCTTT CCAACTATTT        120

TTCAAATTTT CAAAATATCT TGATTGCAAA ATACCATCTG CTAACAATTT ATTTTCTTGC        180

ACAATCGTTG CATTCATAAA TGTACACTCT CCATGAAATT TTCTAGACAT TTCATAAATC        240

AGTGTATTCA CATGGTATTT AGCGTGTATG TGACTAGGAC CACCTGCTAG AGGATAGAAG        300

TGAACATTTC GGACACTTTT ACTGTGAATT AAATCTACTA AATTACTTAA ACTTTTCCCC        360

CAAGAAAAGC CAATTTTCAT ATTATCATCA ATTAGATTCC TAAGGACGCC TGCTGCAACT        420

TGAGAAATTC TTTCAGATAA AATTGTTGGA GTATCATCAA ATTCATTTGG AATAATTTCT        480

AAACTTTCCA AACTGTATTT TTCTTTTACA TAATTTTCCA ACTTAAACAT ATTGGTATCA        540
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                                1264
AAATTCTCTA TTTCAATTTT AACAATTCCT ACATTCCTTG CTTCTGTTAA CATTCTACTA       600

ATAGAGGTTC TATAAATTCC TAATTTTGCT GCTATTTGTG ACTGATTTAA GTTTTCAATA       660

TAATACAGAT AAGCAATTTT AGAAAGCAGT TTATTCCTAT CTTGATTCAT ACACTTAACC       720

TCTTACGAAA CTACCTTAAC CATTATCCCA GCATTTTCTA ATGTAGCTAT ATTTTGTTTA       780

GAAAGTTTTT CGTCTGTTAT TACTTCATAG ACTTGACTTA AAGCAAATCT TCTTACTGTA       840

CCTCTTTTAT CAAATTTACT TGAGTCAGTT AGGACAATGA CTTTATCCGA CACTGCTGAA       900

ATATATTGAA CTACCTCACT GCGCATTAAA TCTTTTCCGG TAAAGCCCAT CTCTTTATCG       960

TAACCATCTG TCCCAACAAA AGCTTGACAC ACATGAAAAG TCTGTATCAT TTCTTTTAAT      1020

AAAGGTCCTA CAGTCACCTG TGAATCTTTC TGAAACTCAC CACCAAGAAC AATAACACGA      1080

CATGAATCAT AAGCTCTCAC AAAATTTGCT ATAAAAAACG AATTTGTTAC AATCGTAACA      1140

TTTCTTTTTT GCTTGCAAAT TTCCTCAGCA AGTAAAGCAC AGGTCGATCC AGATTCTATC      1200

ATTATTGTTT CATTATCTGA CACCAATTTT ACTGCTTCCT GAACAATTTT TCTCTTAGTT      1260

TCATAATTAA TTGACAAACG TACATTTAAG TCATCTCCAC TATTTAATAC AGCATATCCA      1320

TGCTCTCTGT GTAATAAACC TTTTGACTCT AATTTATCTA AATCTTTTCT AATCGTTACT      1380

TTCGATACAT TTAATTTTTC CGATAATGTA TTAACGTCGA TCTTTTCATA TTCTGATACT      1440

AATTTAATAA TTTGTTCCAA TCTTTTCATT TTACACCTCC GTTTTATTCT ACCAAAATAA      1500

AAAGCAAAAA ACAACAAATT AACCTTTCGT TCGTAATTGT TTTTCTTTCG TTTTTGTGAT      1560

AGGATAGACT TATGAAGAGG AGGAACTCTT ATGGAAATAT CTAAAGGAAT TATTTTTAAT      1620

ATTCAACACT TTTCAATTCA TGACGGTCCG GGTATTCGTA CAACTGTTTT TTTAAAAGGA      1680

TGTCCTCTGC GCTGTCCATG GTGTTCTAAT CCTGAATCTC AAAGAATGAA ACCTGAAAAA      1740

ATGAAAGATG CTCAACGAGA GAAATTCACC TTAGTCGGTG AAGAAAAGAC TGTAGAAGAA      1800

ATTATTACAG AGGTATTAAA AGACAAAGAA TTTTACGAAG AATCCGGTGG AGGTTTAACT      1860

TTATCAGGAG GTGAAATATT TGCTCAGTTT GAATTTGCTA AAGCCATCTT AAAATCAGCT      1920

AAAGAACATC ACATACACAC TGCCATTGAA ACTACTGCCT TTGTTGATCA TGAAAAATTT      1980

ATTGATTTAA TTCAATATGT GGATTTTATC TACACAGACC TAAAACATTA TAATTCTATA      2040

AAACATAAAA AAGTGACTGG GGTTTTTAAT CAAATGATTA TTAAAAACAT TCATTATGCT      2100

TTTTCACAAA ATAAAACTAT CGTTTTAAGA ATCCCAGTTA TTCCTAATTT TAACAATAGT      2160

TTAGAGGATG CAGAAAAATT CGCTACTCTA TTTAACTCAT TAAATATCGA CCAAGTTCAA      2220

CTACTCCCTT TTCATCAATT TGGTGAAAAC AAATATCGTT TATTAAATCG GAAATATGAA      2280

ATGGATGGAA TCAACGCACT TCATCCwGAA GATCTTATTG ATTATCAAAA GGTATTTCTG      2340
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                                   1265

AACCACCATA TTAATTGTTA TTTCTAGTTT ATTTCCTTGA AATGCTCTAG CTATTTGCAG   2400

ATAACAAGCA TCTATAATAC ATACTTAACT TTTCAAAAGG TTTAGCTAAA AAATTTTAGC   2460

CAAACCTTTT CTATTTTACC TTGCTCTAGA ATTTTTAAAC TGCTATACTT ATCACAAAAA   2520

AACG   2524

(2) INFORMATION FOR SEQ ID NO: 243:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 2359 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 243:

CGTGCTTGGG GGCTTGTGGT CAAAAGGAAA GTCAGACAGG AAAGGGGATG AAAATTGTGA   60

CCAGTTTTTA TCCTATCTAC GCTATGGTTA AGGAAGTATC TGGTGACTTG AATGATGTTC   120

GGATGATTCA GTCAAGTAGT GGTATTCACT CCTTTGAACC TTCGGCAAAT GATATCGCAG   180

CCATCTATGA TGCAGATGTC TTTGTTTACC ATTCTCATAC ACTCGAATCT TGGGCAGGAA   240

GTCTGGATCC AAATCTAAAA AAATCCAAAG TGAAGGTCTT AGAGGCTTCT GAGGGAATGA   300

CCTTGGAACG TGTCCCTGGA CTAGAGGATG TGGAAGCAGG GGATGGAGTT GATCAAAAAA   360

CGCTCTATGA CCCTCACACA TGGCTAGATC CTGAAAAAGC TGGAGAAGAA GCCCAAATTA   420

TCGCTGATAA ACTTTCAGAG GTGGATAGTG AGCATAAAGA GACTTATCAA AAAAATGCGC   480

AAGCCTTTAT CAAAAAAGCT CAGGAATTGA CTAAGAAATT CCAACCAAAA TTTGAAAAAG   540

CGACTCAGAA AACATTTGTA ACACAACATA CAGCCTTTTC TTATCTAGCG AAGAGATTTG   600

GGCTTAATCA ACTTGGTATT GCAGGTATCT CTCCTGAACA AGAACCAAGT CCACGACAAC   660

TAACAGAAAT TCAGGAATTT GTTAAGACCT ATAAGGTTAA AACGATTTTT ACAGAAAGTA   720

ACGCTTCTTC AAAAGTAGCT GAAACTCTTG TCAAATCAAC AGGTGTGGGT CTTAAAACTC   780

TGAATCCTTT AGAGTCAGAC CCACAAAATG ACAAGACCTA TTTAGAAAAT CTTGAAGAAA   840

ATATGAGTAT TCTAGCAGAA GAATTAAAGT GAGGAAAGAA TGAAAATTAA TAAAAAATAT   900

CTAGCAGGTT CAGTGGCAGT CCTTGCCCTA AGTGTTTGTT CCTATGAGCT TGGACGTTAC   960

CAAGCTGGTC AGGATAAGAA AGAGTCTAAT CGAGTTGCTT ATATAGATGG TGATCAGGCT   1020

GGTCAAAAGG CAGAAAACTT GACACCAGAT GAAGTCAGTA AGAGGGAGGG GATCAACGCC   1080

GAACAAATTG TTATCAAGAT TACGGATCAA GGTTATGTGA CCTCTCATGG AGACCATTAT   1140

1266

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CATTACTATA ATGGCAAGGT TCCTTATGAT GCCATCATCA GTGAAGAGCT CCTCATGAAA    1200

GATCCGAATT ATCAGTTGAA GGATTCAGAC ATTGTCAATG AAATCAAGGG TGGTTATGTC    1260

ATTAAGGTAA ACGGTAAATA CTATGTTTAC CTTAAGGATG CAGCTCATGC GGATAATATT    1320

CGGACAAAAG AAGAGATTAA ACGTCAGAAG CAGGAACGCA GTCATAATCA TAACTCAAGA    1380

GCAGATAATG CTGTTGCTGC AGCCAGAGCC CAAGGACGTT ATACAACGGA TGATGGGTAT    1440

ATCTTCAATG CATCTGATAT CATTGAGGAC ACGGGTGATG CTTATATCGT TCCTCACGGC    1500

GACCATTACC ATTACATTCC TAAGAATGAG TTATCAGCTA GCGAGTTAGC TGCTGCAGAA    1560

GCCTATTGGA ATGGGAAGCA GGGATCTCGT CCTTCTTCAA GTTCTAGTTA TAATGCAAAT    1620

CCAGCTCAAC CAAGATTGTC AGAGAACCAC AATCTGACTG TCACTCCAAC TTATCATCAA    1680

AATCAAGGGG AAAACATTTC AAGCCTTTTA CGTGAATTGT ATGCTAAACC CTTATCAGAA    1740

CGCCATGTGG AATCTGATGG CCTTATTTTC GACCCAGCGC AAATCACAAG TCGAACCGCC    1800

AGAGGTGTAG CTGTCCCTCA TGGTAACCAT TACCACTTTA TCCCTTATGA ACAAATGTCT    1860

GAATTGGAAA AACGAATTGC TCGTATTATT CCCCTTCGTT ATCGTTCAAA CCATTGGGTA    1920

CCAGATTCAA GACCAGAAGA ACCAAGTCCA CAACCGACTC CAGAACCTAG TCCAAGTCCG    1980

CAACCAGCTC CAAGCAATCC AATTGATGAG AAATTGGTCA AAGAAGCTGT TCGAAAAGTA    2040

GGCGATGGTT ATGTCTTTGA GGAGAATGGA GTTTCTCGTT ATATCCCAGC CAAGGATCTT    2100

TCAGCAGAAA CAGCAGCAGG CATTGATAGC AAACTGGCCA AGCAGGAAAG TTTATCTCAT    2160

AAGCTAGGAA CTAAGAAAAC TGACCTCCCA TCTAGTGATC GAGAATTTTA CAATAAGGCT    2220

TATGACTTAC TAGCAAGAAT TCACCAAGAT TTACTTGATA ATAAAGGTCG ACAAGTTGAT    2280

TTTGAGGCTT TGGATAACCT GTTGGAACGA CTCAAGGATG TCTCAAGTGA TAAAGTCAAG    2340

TTAGTGGAAG ATATTCTTG                                                 2359
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(2) INFORMATION FOR SEQ ID NO: 244:

   (i) SEQUENCE CHARACTERISTICS:
      (A) LENGTH: 1052 base pairs
      (B) TYPE: nucleic acid
      (C) STRANDEDNESS: double
      (D) TOPOLOGY: linear

   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 244:

```
TTCTTTCTGC TATAATCGTA TAAAATACTT ACTTTAGGAG TTCTTATGAA AGTTGTTAAA     60

TTTGGAGGTA GTTCTCTTGC CTCTGCTAGT CAATTAGAAA AAGTTTTAAA CATCGTCAAA    120

AGCGATTCAG AGCGTCGTTT TGTAGTCGTT TCTGCGCCTG GTAAACGCAA TGCTGAAGAT    180
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1267

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ACTAAGGTTA CGGATGCCCT GATTAAATAC TACCGCGACT ATGTTGCGGG TAACGATATT      240

AGCAAGAACC AAAGCTGGAT TATCGACCGC TATGCTGCTA TGGTTAGTGA ATTGGGACTA      300

AAACCAGCTG TGCTAGAAAA AATTTCTAAA AGCATTCACG CCTTGGCCAC TCTTCCTATT      360

GAAGAAAATG AATTTCTCTA CGATACTTTC CTAGCAGCCG GTGAAAATAA CAATGCCAAA      420

TTGATTGCTG CCTACTTTAA CCAAAATGGT ATCGATGCAC GCTATATGCA CCCTAGAGAA      480

GCTGGGATTG TGGTCACAAG TGAACCTGGT CACGCTCGCA TCATTCCATC AAGTTATGAC      540

AAGATTGAAG AATTGACAAA CACCAATGAA GTCCTTGTCA TTCCTGGTTT CTTTGGTGTC      600

ACTAAGGAAA ATCAAATCTG TACTTTCTCA CGTGGAGGTT CTGATATTAC AGGTTCTATC      660

ATTGCTGCTG GTGTCAAAGC TGACCTCTAT GAAAACTTTA CGGACGTTGA TGGTATCTTT      720

GCAGCCCACC CTGGTATTAT CCACCAACCA CACTCGATTC CTGAGTTGAC CTACCGTGAA      780

ATGCGCGAGT TGGCCTATGC AGGCTTCTCA GTCCTTCATG ACGAGGCTCT TCTTCCTGCC      840

TACCGTGGAA AAATTCCTCT GGTTATCAAG AATACCAACA ACCCTGACCA TCCAGGTACT      900

CGTATCGTTC TAAAACACAG TAATGATGAA TTTCCAGTTG TGGGAATTGC TGGTGACTCA      960

GGCTTTGTCA GCATTAACAT GTCGAAATAC CTCATGAACC GTGAGGTTGG ATTTGGCCGC     1020

AAGGTTCTGC AAATCCTGGA AGAACTTAAC AT                                   1052
```

(2) INFORMATION FOR SEQ ID NO: 245:

     (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 855 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 245:

```
CCCTCGAAAA CTAAGCCGAT GAAGTCAGAA CACTTCAATC CTGTTCGTGA CTGGTGGGAA       60

AATCGTGAAG AGATTCTGGA AGGTAAGTTC TACAAATCTA AATCATTTAC ACCTAGTGAA      120

TTGGCTGAGT TGAATTATAA TTTAGACCAG TGTGACTTTC CAAAAGAGGA AGAGGAAATC      180

TTAAATCCCT TTGAGTTGAT TCAGAATTAT CAAGCGGAAA GAGCAACTTT AAATCATAAG      240

ATTGATAATG TATTAGCTGA TATTTTGCAG TTGTTGGAGG ACAAATAATG ACACCAGAAC      300

AACTTAAAGC AAGTATTCTC CAAAGAGCGA TGGAAGGGAA ATTAGTGCCG CAAAATCCCA      360

ATGACGAACC TGCAAGTGAA TTATTAAAGA GAATTAAAGC TGAAAAAGAA AAACTTATCA      420

GTGAAGGAAA AATCAAACGA GATAAAAAGG AAACTGAGAT ATTTCGTGGT GATGATGGGA      480
```

1268

AACATTATGG GAAGTTTGCT GATGGAAGCA CTCAAGAAAT TGATGTTCCT TATGATATTC   540

CTGATACTTG GGAGTGGGTG AGGATAAAAT CAATTTATTG GAATTTTGGG CAAAATAAGC   600

CAGAGAAATC CTTTAGGTAT ATAGATACGT CTAGTATTGA TAGAAAAAAG AACATAATCA   660

ACTACAAAAA TCTACAATAT CTTTCACCTG AACAAGCGCC TTCCCGTGCT AGAAAATTAG   720

TTTCGCAGAA TAGTGTCTTA TTTTCAACAG TTAGACCATA TCTAAAAAAT ATTGCTGTAG   780

TTAGAGAACT TAAAGAGTAT TTGATAGCTA GTACAGCATT TAATGTTTTG GGATACTTTA   840

CTTAACGAAA CATAT   855

(2) INFORMATION FOR SEQ ID NO: 246:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 660 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 246:

TTTAGGAAGG CTATCCGTAA TTTTACAAAG GATTTAGATA TTACAGAGGA ACATTTAGAT   60

ATTATCAAAA GAGAGATGTT TGGCGAATTT TTCAGTAGCA TGAACTCTCT TGAATTTATT   120

GCAACGCAAT ATGATGCTTT TGAAAATGGT GAGATAATTT TTGATTTGCC GAAAATTTTA   180

CAGGAAATTA CTTTAGAGGA TGTCCTTGAT GCTGGACATC ATTTAATAGA TGATGGTGAC   240

ATAGTTGATT TTACAATATT CCCATCGTAG TAACCTATTA TAATAGACAC TAGAAAGAAG   300

GGATGACAAG TATGAGAAAA AAAACAATTG GAGAGGTTTT ACGATTAGCT AGAATCAATC   360

AGGGATTGAG TTTAGATGAA TTGCAGAAAA AGACAGAAAT CCAGTTAGAT ATGTTGGAAG   420

CAATGGAAGC AGACGATTTC GATCAACTTC CAAGTCCTTT TTACACGCGT TCTTTCTTGA   480

AAAAATATGC ATGGGCTGTT GAGTTAGATG ACCAAATTGT TTTGGATGCT TATGATTCTG   540

GGAGTATGAT TACTTATGAG GAAGTAGATG TTGATGAAGA TGAGTTGACA GGTCGTAGAC   600

GTTCAAGTAA GAAAAAGAAG AAAAAAACAT CATTTTTACC TTTATTTTAT TTTATCCTGG   660

(2) INFORMATION FOR SEQ ID NO: 247:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 1805 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 247:

1269

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CCGGTTGCAC AGGATCGTGC ATAGTCAACT CTTCAAGTAT AGCATATCTC CTATTTTCTT        60

ACAAGTAATA ACACCTAAAA TGAAGCTTTT TCTTTTACTT TTTTCTGCCA AGAGGCAAAA       120

AGCATGCTGA GGTAAAAAAC GCTCATCATA ATAGGAACAC CAAGAATGGT CTTTTCATGA       180

TAGAAAATCG TCAAATAGGC TGAAAAGACA ACGCCAAGGA CAAAACTACT AAGCAGGCTA       240

ACAAATATGA ATCCTTCACG CAAAAAAGGA GTGTGCTTGG TTCGGAAATA ATCTCCAAAA       300

GCCAGCATGG TCCGTTTGAT ATTCCCTGTC ATAAAAGCGT TATTATAGGC AATACCCGAC       360

ACTTCTCCAA AAGCAGTTGT CACCAGTCCC ATACAGAAGG CCAAGGGCGG CACTAGATAG       420

ATATTATCCA CAGTTTGCGG CACAAAAGCA ATAATGATTG ATAAGATTGC CAAGGGAATC       480

AAGGACAGAA TAGGTTTTTT CACAATTCTC AATTTTTCCT TATAAATCGT TAATAAAAAG       540

ACTCCCATCA TAAACGCTAG CAAGGTGAGA ACCTTGTCCC TAACATCCGA AACATTATTT       600

TTAATTAATT CTACTGAAAG AAAGACAACA TTTCCAGTTT GTCCAGCTAC AAGGGTATTC       660

CCGCGAACAA TAAAAGTGTA AGCATCCACA TATCCAGCAC AAAACGTCAA AAAAAGTGCT       720

AACCTTTTAG ACTGACGTGA TATTTTTCTT ATAGGTAATA ACCTCATTTT ACCTCCCATT       780

GTATTTTCTC TTAGAAATAT TGTACCATTT TCTTTCTAAA AAATCGTAGG CTACCATTTA       840

GATTTTACTA TTAGCATAAA AATAATAATA GACAACTATT TATCCAAAAA TAGATAGATG       900

TAACATGTTT GCAAACAAAG CATACGAACC TTTAGTAAAA TCATTCCAT GAAACTAGAA       960

TAGAGCCCTC TTAGCAAAAA TCATTATTTT AATTTATTTC TAATCACTCC TTGACATAAA      1020

TAACTCTCAC CAATAAAAGA CTATGTCTTA AAAAAATGGT ATAATAAAAT CAATACTTGG      1080

GCTTGATGGC TATGCTACTA ATAACAATTA GGAGAGAAAA TCAGGCACTT GTTAACAACA      1140

AGGATTATCC CCTTGAGATG AAAGGAACTT TAGAAATCTT ATGATGAACA TGCAAAACAT      1200

GATGCGTCAA GCACAAAAAC TTCAAAAACA AATGGAACAA AGCCAAGCTG AACTTGCTGC      1260

TATGCAATTT GTTGGCAAAT CTGCTCAAGA TCTTGTCCAA GCGACCTTAA CTGGCGATAA      1320

GAAAGTTGTC AGCATTGATT TCAATCCAGC TGTCGTTGAC CCAGAGGACC TTGAGACTCT      1380

TTCTGATATG ACCGTTCAAG CCATCAACTC TGCTCTTGAA CAAATCGATG AAACTACCAA      1440

GAAAAAACTG GGTGCTTTCG CTGGGAAATT ACCTTTCTAA AAACAAGGAG CTAGAACAAT      1500

GCTTGTCGAT AACAAAGGCT AAGAAAGGTG CAAAAATGAC TCTATAATAT TTGTAGTGGG      1560

TAAATCCCCT ATGGATATTA TGGAGCCTAT TTTTGTGTAG AAAAAAGTCC CATATGACCT      1620

ATAATGAAAA GCGACAAAAC AACTCATTAG AAAGAATCAT ATGGAACAAT TACATTTTAT      1680

CACAAAATTA CTAGACATTA AAGACCCTAA TATCCAGATT TTAGACATCG TCAATAAGGA      1740
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                               1270
    TACACACAAG GwAATCATCG CCAAACTGGr CTATGAAGCT CCATCTTGTC CTGAGTGCGG   1800

    AAGTC                                                               1805
```

(2) INFORMATION FOR SEQ ID NO: 248:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2516 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 248:

```
    CTGCATCTAG TTTGTTTCTC CCTACAGTTT TAGCTAGACA GATTGGAGAT TATGATTTAA     60

    CGTCGCCGCG TTGGGGTTCG GATACAACTA GTGAGCTTGA GAAAGAAAAC TCCTCTGCTG    120

    GAATTAATAA TAATGACAGC ACTGGTGGCG GTAAAAGGTT AAATACCTCT ATTCGTAGCG    180

    CCTATAGTGG GTCAGATATT ACCCCGGTAT ATTCATTGGG GTCTGGCTCT AGGATTGTCA    240

    TGTACTATAA TGGAGGTGGT GACAATTATA TTGGTTCTGG TACTAGATTA GCTATGGCGC    300

    CACAATTTGG AAATCATGTA AGAATTCATA CTTCAGGTTC TTGGAATCCA GATTCTTATT    360

    AACTTACTTG TCAGAGTAAG CCTTAAAGAT GGTTGATTGT GGGTGTAGCA TGAAAAAAGA    420

    ATGCTACACC CTATTTTTAT TATAAGGAGG AGTAAGGATG GAATTTTTCA TTTGTAATCT    480

    TGTACGAGTC GTTCAATCAC CTCGATTTTA TATGTCTTTA TTTTTGACCC TTCTTTGCAT    540

    GAGTTTAGGA AATTTCCTTG CTTTCAATGG TATTTATAAA ATTGAAGGTT TATCGATTTT    600

    TTTTGCCGCT TCTTCTATTC GAGGATTTTC ACCGATTAGC CTAGTAGCTG CACTTATCTG    660

    TACACTGCCC TATTCTAGTC AGATAATAGA GGATGCTGAG AGTCATTTTC TAACAGCACA    720

    ATTGTGTCGA ATTTCTAAAA AGAAGTATCT GGCTATTGTG GGTAGTACTG TAATTATTTC    780

    TTCTTTTCTA GTCTTTTTTC TCCCCTATTT ATTATTATTA GGAATTAATC TTTTAGTGAC    840

    TCCTTATCAG GAAATTTATA TTGGAGATTA TAGTGGTGCC TTAAAAGAAT TATTTGATTC    900

    CAATCAGTTT CTCTATAGTC TTGTAACGAC TCTCTGGTAT GGAGTTTGGG GCGCTGTGTT    960

    CTCTATTTTT GGACTAGCTA GTGCTTTGCT AGTGAAGAAA AAAATAGGAG CTATTTTCAT   1020

    CCCAGTTGCC TATATGATGG TTGGTGGTAT TTTTTGGGCT ATTTTAGGGC TATCTTACTT   1080

    AGAACCTGTG ACAACGCTAG CTTTGGGATA TCAGAAAGAT ATCAGTCTTT CCTTAGTTAG   1140

    TGCTCATCTT GCTTTTATTT TATTTGTTAG TTGTTTGGTT GTTTATGGTA CATTTTTTCT   1200

    ACATTCAGAG GACTATGTAT AATGAAACAA TTTGTTCAAT TTTATAAAAA AGATTCTTA    1260

    GCAGTATTGG TTTATTTTAT ATTACTGCTA TCCTGTGTTT TATCTAGTAC AGTATATTTA   1320
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1271

TTGCGCtGTC GCCAATATTC AATCCATCCA AATGTATTAG AATGGATCTT AGTTTTACTT   1380

CAAGATATGA CGACTGGAGT ATATTGCTTT CCGTTCACAT ATATATTGTT CTTTTTTTAT   1440

TTGATGAATA ACTATTTTAA TAGGTTGGAG TGTCGCATTC GTCTGAAATC AATTAAGCAC   1500

TTTACCAGTT TTAGTTTCAA ATTAGCAGCT CTTAGTACGG GGATTTGGAC GGCGACTTTA   1560

TTTTTATTGA TTTTTCTAAT TGCATTTAGT AATGGTTTTA GCTTCTCTTT GGAGATAAAG   1620

GAGGTTGATT TTTTAAGAGA ATTTTATGGT ATAAGTATTG CAAACAATGC TAGTTTCTTT   1680

ATAGGATTTT TTTTCTCTTA TATAGCATAC TATTTCTTTT TATCCTTACT TACTATTAGC   1740

AGTTTTTCTT GGTTTAAAAA ATCAAACATG AGCTTAGTAT TTCTGTTTAC TTTTTTATTT   1800

GTAGAATCCT TATTCTGGAT TTATCAGTTG GACAATGGGA TAATTGGATT ATTGCCAATT   1860

TTTCAGTATA TGGTAAATTC CAATCCGTAT GCATTGATTT ATTGGCTTAC ATTACTATCT   1920

ATCATAATTC CATTGACTGT ATTTTCTGTT CATAGAAACT GGAGGAGAGT GTAAAAGTTG   1980

GAAATGGGAA AGTTAAGTAG TCACATGTGG AGGTTGAATC AGATAATCTA TACCAAGTAC   2040

TTTTGGGGTT ATGTTCTTTT TTGGATATTG ATTTGTTTAG GATTATGGTA TTGGTTAGAA   2100

GGAAATGATA GACTTGTTAT AGAAATTTTA AAAGGGCCTA ATCTGAGTCA AAACTCTTTT   2160

TTAGTCTTAT CTATATGGTT GCTTCATTGG TTTATTATTC ATACATTTTT TCTAGCAGTT   2220

GTATATCGTA GAAGAGCATC CGATTTCTTT ATGGAAGTGA TTCGATTTTC TTCTATTAAC   2280

CTCTGGATTA GGTATCAGAT TTGGACCTGT TTTCTTTATG GACTCATTTT AATCATGGTA   2340

AAAGTTCTAG TGATTCAATT TATGTTACAG TTACCAAACT GGGATATAGG AGTTTTGTTT   2400

ATAGTTGATT CTTTGAATGC TTGTGTGTTA GTCTTGTTTT GCTTTATGTT ATACGCACTA   2460

GGAGCGAATG TACAAATGAA CTTTGCTTGC GTTAGTTTCT TTTTACTCAT GATTGG   2516

(2) INFORMATION FOR SEQ ID NO: 249:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 1364 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 249:

CGGTGTTTTT TTGTAAATTT TCTAGCACTT GTATGGTAAA ATAGATACAG GTGTTCATTA   60

AACTAGACTA AAAACCTATT TAAGCAGGCA AAATGAAGAA ATACCAACAA TTATTTAAGC   120

AAATCCAAGA AACCATTCAA AACGAGACTT ACGCTGTCGG AGATTTCCTT CCTAGCGAGC   180

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                                    1272
ACGACCTTAT GGAGCAATAT CAAGTGAGTC GTGATACCGT CCGAAAGcCC TGTCTCTCCT        240

CCAAGAGGAA GGATTGATCA AAAAGATAAG AGGGCAAGGT TCTCAAGTCG TCAAAGAAGA        300

AACCGTCAAT TTCCCTGTAT CCAACCTAAC CAGCTACCAA GAACTAGTTA AAGAACTTGG        360

ACTGCGCTCT AAAACCAACG TGGTCAGTCT GGACAAGATT ATTATTGATA AAAAATCCTC        420

ACTGATAACC GGTTTCCCAG AGTTTCGGAT GGTTTGGAAG GTGGTCCGCC AGCGTGTGGT        480

GGATGATCTG GTATCCGTTC TGGATACGGA CTATCTGGAT ATGGAACTCA TCCCAAATCT        540

CACTCGCCAA ATTGCTGAGC AGTCTATCTA TTCTTATATA GAAATGGCC TCAAACTCCT         600

TATTGATTAT GCTCAGAAGG AAATCACCAT TGACCACTCA AGCGACCGAG ACAAGATTCT        660

CATGGACATT GGCAAAGACC CTTATGTCGT TTCGATTAAA TCAAAAGTCT ATCTCCAAGA        720

CGGACGCCAA TTTCAGTTTA CCGAAAGTCG CCATAAGTTA GAGAAATTTA GATTTGTAGA        780

TTTTGCAAAA CGCAAGAAAT AAAAGACTGA GACACCAGAT CTCAGCCTTT TTCGGCTCTA        840

TAATATTTGT AGTGGGTAAC CCCCCTATGG ATATTATGGA GCCTATTTTG TGTAGAAAAA        900

AAGTCCCATA TGACCTATAA TGAAAAGCGA CAAAACAACT CATTAGAAAG ATTCATATGG        960

AACAATTACA TTTTATCACA AAACTGCTCG ATATTAAAGA CCCAAACATC AAGATTCTAG        1020

ACATCATCAA TATGGATACC CACAAAGAAA TTATCGCTAA GCTGGATTAT GAGGCTCCAT        1080

CTTGCCCTGA TTGTGGAAGT CTAATGAAGA AATATGACTT TCAAAAACCG TCTAAGATCC        1140

CTTACCTCGA AACAACTGGT ATGCCTACTA GAATTCTCCT TAGAAAGCGT CGTTTCAAGT        1200

GCTATCATTG TTCTAAAATG ATGGTCGCTG AAACTTCTAT CGTCAAGAAG AATCATCAAA        1260

TTCCTCGTAT TATCAACCAA AAAATTGCGC AAAAGTTGAT TGAGAAGATT TCTATGACCG        1320

ATATTGCTCA TCAGCTGGCC ATTTCAACTT CAACTGTCAT TCGG                        1364
```

(2) INFORMATION FOR SEQ ID NO: 250:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1227 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 250:

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CCATGAAGAC CGCTTGGAAT TGGAATGGCA CAAGTCTTTG TTGAATGGTC TATTCCCATT         60

GACAATCGGT GGAGGAATTG GACAATCTCG TATGGCCATG TTCCTACTTC GCAAGAGACA        120

CATCGGAGAA GTGCAAACAA GTGTTTGGCC TCAAGAAGTC CGCGATACTT ACGAAAATAT        180

TTTGTAGAGA ATCGAACCGC AAGGTTCGGT TTTCTTTCTC TTTTTGTCTA TAATTTGGTA        240
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1273

TAATAAACAG TATGAAAATC GTATCAGGAA TCTATGGGGG ACGTCCCCTC AAGACACTAG   300

AAGGCAAGAC GACAAGACCT ACTTCGGATA AGGTTAGGGG AGCCATTTTT AACATGATTG   360

GTCCCTACTT TGAAGTGGGA CGAGTCTTGG ACCTTTATGC AGGTAGTGGT GGTTTATCTA   420

TCGAAGCAGT ATCGCGTGGC ATGTCCAGTG CTGTTTTGGT GGAGCGAGAC CGTAAGcTCA   480

GACCATCGTG GCTGAAAATA TCCAGATGAC CAAGGAAGTT GGAAAATTTC AACTCCTCAA   540

GATGGATGCA GAAAGGGCAT TGGAACAGGT ATCTGGGGAA TTTGACCTCG TTTTCTTAGA   600

CCCTCCCTAT GCCAAGGAAC AAATCGTAGC AGATATTGAA AAAATGGCTG AGAGAGAGCT   660

TTTTTCTGAA GATGTTATGG TTGTGTGCGA GACGGATAAA GCCGTTGAAC TTCCAGAAGA   720

AATTGCCTGT CTGGGTATCT GGAAGGAAAA GATTTATGGA ATTAGTAAGG TGACAGTCTA   780

TGTCAGATAA GATTGGCTTA TTCACAGGCT CATTTGATCC GATGACAAAT GGGCATCTGG   840

ATATCATTGA ACGGGCGAGC AGACTTTTTG ATAAGCTTTA TGTGGGTATT TTTTTTAATC   900

CCCACAAACA AGGATTTCTC CCTCTTGAAA ATCGTAAACG GGGGTTAGAA AAGGCTGTGA   960

AACATTTGGG AAATGTTAAA GTCGTGTCTT CTCATGATAA ATTGGTGGTC GATGTCGCAA   1020

AAAGACTGGG GGCTACTTGC CTAGTGCGAG GTTTGAGAAA TGCGTCGGAT TTGCAATATG   1080

AAGCCAGTTT TGATTACTAC AATCATCAGC TGTCTTCTGA TATAGAGACT ATTTATTTAC   1140

ATAGTCGACC TGAACATCTC TATATCAGTT CATCAGGCGT TAGAGAGCTT TTGAAGTTTG   1200

GTCAGGATAT TGCCTGCTAT GTTCCCG   1227

(2) INFORMATION FOR SEQ ID NO: 251:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 3652 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 251:

CCGGTCAAGT TAAAAACGCT ATTTCTTCCC ATTTTATTTA TTTTTTAGGA GTGGTAACGT   60

ATCAAAATAG CCCAAGCGTT CTCACCCGTG TGAGTTTGAA TAATGGAACC CGTTTCCAAA   120

ACAGAAATTG GCTTTTCAAC ATAAGCTTGT AAGCTTTCTT TCATCTCTTT TGCCCAATCA   180

TCACTACCAG AAATATGAAAT TCCAATCTCT GCTACAGCAC GTTCAGAAAG CGATGTTATC   240

AACTCATCTA ACCATTTTTT AAATGTTTTA GTTCCACGAC CTTTAACCAT TGGCTGCAAT   300

TCATGGTCTT TCATTTGCAT GACAGCACGG ATATTGAGAA GAGAGCTCAA CAAGCCAGTT   360

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                           1274
ACACGGCTAA TTCGTCCACC TTTGACAAGA TTTTCCAAAG TTGAAACACC AATATAAAGC     420

TCTGTATGGT TTTTAACCTC TTCTACATGA GATAAAATTG CCTCCATATC TTTACCTTCT     480

TGAGCTAACT TCGCAGCCTC AACAACTTGG AATTTCAGGG CTTGGTCAGT GAAGGAACTA     540

TCAACAACAG TCACATCTGC AGTAGATAGG CTAGCACCTT GGCGTGCTGC TTCTACCGTA     600

CCCGAAAGAG CATGGGACAT ATGAATAGCA AGAATCTGGC CACCATCTTT GCATAGGTCT     660

TCAAAAATCT CAGCAAAGAC ACCTACAGGT GGCTGACTTG TTTTCGGAAG ATTCTTACTT     720

TCTTGCATCA ACTGAAGAAA TTTACCTTCT TCTTTCAAAT CCGCATCAGA ATAAACAACA     780

TTATCAATCA TTACAGATAA TGGAACAATT GTAATATCTA ATTGCTTTAC TAGTTCAGGT     840

TCAATAGTAA CAGATGAATC GGTTACAATC TTAATTTTTG TCATAGTATC AATCTTTCTA     900

TTTTAGGATT CAGATTGGTT TCCTTACTTC TAATTATATC AAAAAAAAGA TTAAAAATCC     960

TAATGGAGTC AATCAAATTT TCCGTAAAAT TTGATATAAT CAACTTATAA GAAAAGAGGT    1020

GTCCTATGAT TAAAAAAATT TACCCCATTT TTACCATTTT ACTAGGTGCT GCTATTTATG    1080

CTTTTGGACT GACTTATTTT GTAGTTCCCC ATCATCTCTT TGAAGGAGGG GCGACAGGCA    1140

TTACCCTCAT CACCTTTTAT CTTTTTAAAA TCCCTGTTTC CCTCATGAAC CTGCTGATTA    1200

ATATTCCCCT TTTCATCCTA GCTTGGAAGA TTTTTGGAGC CAAATCCCTC TATTCTAGTT    1260

TACTAGGAAC CTTAGCTTTG TCCGGCTGGT TAGCTTTTTT TGAGCATATT CCCCTTCATA    1320

TTGATCTTCA AGGTGATTTA CTAATCACAG CCCTTATAGC GGGAATCCTA TTGGGAATTG    1380

GCCTTGGAAT TATTTTTAAT GCTGGAGGTA CAACTGGCGG AACTGATATT CTAGCTCGTA    1440

TTCTCAACAA ATACACTCAT ATATCCATAG GAAAACTGCT CTTTATCTTA GATTTTTGTA    1500

TTCTCATGTT GATTCTCCTA ATCTTCAAGG ATTTGAGATT GGTTTCCTAC ACGCTTTTGT    1560

TTGATTTTAT TGTTTCTCGT GTTATTGATT TGATTGGTGA AGGAGGATAT GCCGGCAAAG    1620

GCTTTATGAT TATCACAAAA CGTCCTGACC AACTTGCTAA GGCGATTAAT GATGACCTCG    1680

GAAGAGGTGT TACTTTTATT TCTGGTCAAG GCTACTATAG TAAAGAAAAT TTGAAAATCA    1740

TCTACTGTAT TGTCGGAAGA AATGAAATTG TGAAAACGAA GGAAATGATT CATCGAATCG    1800

ATCCTCAAGC CTTTATAACT ATTACAGAAG CCCATGAAAT CCTAGGAGAA GGCTTCACCT    1860

TTGAAAAAGA ATAAAAAGAG GTAATGTCGT GACCTCAAAA GTTAGACTAA ATCATCTATC    1920

TTTTGGGTTA CAGACAACCT CTTTTTTATT TTATTTACTC AAGCTCTTAA GACCAATTCC    1980

GAGTTACTTC TTCATCAGCC TTTAACTGAT CCACTAATTG GTCAACTGAG TCAAATTTGG    2040

TCATATCTCG AATGCGATCA AGCCAATAAA CCATGACGGT TTCCCCATAA ATATCTTGAT    2100

TAAAATCAAA AATATTGACT TCAAAACGTG CTTCTTCTCC ATCAAAGGTC ACATTTTTCC    2160
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1275

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CGACACTAGC CATAGCACGA TACTTCTGTC TTTGAATCTC AACATCAACA ACATAAACGC    2220

CATCTGCTGG CATATAAGTA CGGTCTAAAA GCACTAAATT CGCTGTCGGA TAACCAATTG    2280

TACGACCACG AGCATTACCA TGAACCACCA TACCTCTTGA TGGAAGCGGT GCCCCCAAAA    2340

GTTTTCCTGC TTCTTTCACA TTTCCATCTA AAATAGCTTG ACGGATACGA GTTGAACTAA    2400

TCTTTCCTTT CTCATCTTCT ACAGGTGGAA CAATGATAAC TTCTCCATCA AAGTAATTCT    2460

TTAAATCTTC TGCTGTTTTT TTGTCAGAAC CAAATGTATA ATCAAAACCT GCAACAATAA    2520

TTTTGGCATT CATAGCCTTG ATATAAGTTG CAAAGAATTC TTGTGCAGTG AGACTAGCGA    2580

ATTGACTACT AAAATCAAGG AGATATAATT CTTCTACACC TTCGCGCTTT AATTTTCTTT    2640

CACGTTCAGC AGGGTTCAAA ATATGCAAAA ACAAATCTGG ATGATAAGGC TCTAAAGCGA    2700

TCTTTGGAGA TTCATTAAAG GTCATAACGA CGATAGGCAA CAAATCCTTT CTCGCAGCCT    2760

TGTTGGCAAC ACGAAATAAT TCTTGATGCC CCTTATGTAT GCCATCAAAA TAGCCGAGAA    2820

CAACGACTGA ATCAGATGGT GTGCCAATAT CTTTTTGGTT TTTTATAGGA ATAGTAATAA    2880

TCATAAAATA ATTATATCAT AGCGATAGCT ATTTCTGGAA CAGAAAATCT GAAATGTTGT    2940

TTTTTTCACA TGAAGTGTAC CTGTTTTCAA AAAGCACTTT ATTCTATCGT TGCTTAACTA    3000

TGAACTTTGC AATATTCTTC TCAAAAACTT GTAGGACATC TTCAAAATTT TGCAAGGAGT    3060

GATTAGACTT GTTCGGTAAC CATAAAGTGT CATACTATGC TTATGTATGA AAAAGCCAATC    3120

CAACTAACTC CTGAGAACTT TAAATTACTA ATTGGTGCCG AAAAGGTAGA ATTTAGAATC    3180

GAGGTACACC TATGGCTGTA AAATTTACAA AATGAGACAA CTTGGGCAAG ATGTTTGAAG    3240

AATTTCCTAA ACTCCCTGAT TTGAAGCAAG TCACTTTCCC TAATGACAAA GAAAAAAGCC    3300

AAAACAGCAA AGAAAAACTA GATGACTGCT TTCCAACAAC TCCCATCTAG TGTGCTTCAG    3360

ACTGGGCTAT TTTTCTCTCC ATCTGTTAGC TTGGATTCTC AGACCGTTTC AGCTAAAGAA    3420

TATCTTTTCC CTTATCAGAA GGAACGGCTC AAGCCATTCA GACAAGTGAA GGGACGACAA    3480

GCCAATATTT GAAACCAGAT AGCAGTTCTT ATAGTCAATT GAAATAAAAT CTGAAGAAAT    3540

CGAGTAGGAA ACTCATATCA ATGTTTAACA GTGTTCTATT CCAGATTCAT ACTCAATGAw    3600

AATTAAAGTG CAAACTAGGA AGTTAGCCGC AGGTGATACT TTGGGTACGG CA           3652
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(2) INFORMATION FOR SEQ ID NO: 252:

     (i) SEQUENCE CHARACTERISTICS:
         (A) LENGTH: 743 base pairs
         (B) TYPE: nucleic acid
         (C) STRANDEDNESS: double
         (D) TOPOLOGY: linear

1276

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 252:

GTACCGTGGT GCCAAAGTAC AGCAAGGTTG GCTTTTTGAC AAACAATACC AATCTTGGTT   60

TTACATCAAA GAAAATGGAA ACTATGCTGA TAAAGAATGG ATTTTCGAGA ATGGTCACTA   120

TTATTATCTA AAATCCGGTG GCTACATGGC AGCCAATGAA TGGATTTGGG ATAAGGAATC   180

TTGGTTTTAT CTCAAATTTG ATGGGAAAAT GGCTGAAAAA GAATGGGTCT ACGATTCTCA   240

TAGTCAAGCT TGGTACTACT TCAAATCCGG TGGTTACATG ACAGCCAATG AATGGATTTG   300

GGATAAGGAA TCTTGGTTTT ATCTCAAATC TGATGGGAAA ATAGCTGAAA AAGAATGGGT   360

CTACGATTCT CATAGTCAAG CTTGGTACTA CTTCAAATCC GGTGGTTACA TGACAGCCAA   420

TGAATGGATT TGGGATAAGG AATCTTGGTT TTACCTCAAA TCTGATGGGA AAATAGCTGA   480

AAAAGAATGG GTCTACGATT CTCATAGTCA AGCTTGGTAC TACTTCAAAT CTGGTGGCTA   540

CATGGCGAAA AATGAGACAG TAGATGGTTA TCAGCTTGGA AGCGATGGTA AATGGCTTGG   600

AGGAAAAACT ACAAATGAAA ATGCTGCTTA CTATCAAGTA GTGCCTGTTA CAGCCAATGT   660

TTATGATTCA GATGGTGAAA AGCTTTCCTA TATATCGCAA AGTAGTGTCG TATGGCTAGA   720

TAAGGATAGA AAAAGTGATG ACA   743

(2) INFORMATION FOR SEQ ID NO: 253:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 4010 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 253:

TTTTGGTTGA TGATACGAGG GATTTGGTGA TTCTTCTTGA CGATAGAAGT TTCAGCGACC   60

ATCATTTTTG AACAGTGATA GCACTTGAAT CGACGCTTTC TAAGGAGAAT TCTAGTAGGC   120

ATACCAGTCG TTTCAAGATA AGGAATTTTA GAAGGTTTTT GAAAGTCATA TTTCTTCAAT   180

TGGTTTCCGC ACTCAGGGCA AGATGGGGCG TCGTAGTCCA GTTTGGCGAT GATTTCCTTG   240

TGTGTATCCT TATTGATGAT GTCTAAAATC TGGATATTAG GGTCTTTAAT GTCTAGTAAT   300

TTTGTGATAA AATGTAATTG TTCCATATGA TTCTTTCTAA TGAGTTGTTT TGTCGCTTTT   360

CATTATAGGT CATATGGGAC TTTTTTTCTA CAATAAAATA GGCTCCATAA TATCTATAGT   420

GGATTTACCC ACTACAAATA TTATAGAACC GAATTAATTT AATTAGAGAG CCAACTTTCT   480

AATATAGTAA TCGCGTCATA ACAAGGTATC TATCATTCAT GGAGTTCCTC CTGTATACTA   540

1277

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TTAGTAAAGT AAAACTATTG GAGGATATTT TAATGCCACA ACCTATTGTT CCTGTAGAGA        600

TTCCACAATC TCGTCGTTTT GATTCTAAAA AGAGAAATGA TATTCTGCTT AAAATTCGTA        660

TTGGCAAGCT TGAAGTAAGT TTTTTTCAAT CTCTCAATCT CGAAATGGTA GAACAGCTTT        720

TGGATAAAGT GTTGCTCTAT GACAATTCAT CTATCTAGCC TAGGGCAGGT CTATCTCGTA        780

TGTGGGAAAA CGGATATGAG GCAAGGCATT GATTCATTGG CTTATCTGGT TAAAACCCAC        840

TTTGAATTAG ATCCTTTCTC CGGTCAAGTT TTTCTCTTTT GTGGTGGACG TAAAGACCGC        900

TTTAAAGCCC TTTACTGGGA TGGTCAAGGA TTTTGGCTAC TATATAAACG CTTTGAGAAC        960

GGAAAACTGA CTTGGCCCAG TACAGAAAAG GATGTCAAAG CTCTCACACC TGAACAAGTA       1020

GATTGGCTTA TGAAGGGCTT TTCTATCACT CCAAAAATAA ATTTATCAGA AAGTCGTGAT       1080

TTCTATTGAA ATGAGGACTT TCTTTTTAGT TATAATAAAG TTAGGAAATA AGGAGAGGAA       1140

GCCCATGGAA GAAGATTGAA AATCATTCAA CAACAGAGTG CTACAATTGA TAGTCTCACC       1200

AATGAACTTG CCCTTCTTCG TGAACAAGTG GCTTATCTAA CGCAAAAGCT CTATGGAAAA       1260

TCCTCTGAGA AAAGTGTTTG CCCATCTGGA CAACTCAGTC TTTTTGAAGA GGAACAAAAT       1320

ATGGAAGAAG ACTCTGACTT ACCCAGTTGA AAGAGAAGAA ATCACCTATA AACGTAAGAA       1380

AGCTAAAGGG AAACGTCAAG CTCTTCTTGC CCAATTTGAT TCAGAAGAAG TTCATCATCA       1440

AGTAGAAGAG AGCATTTGCC CTGATTGTCA GGGAGATCTA AAACACATTC GAGCAACCCT       1500

TCAACGACAA GAATTAGTCT TTATTCCTGC GCAATTAAAA CGAATAGATC ATATCCAACA       1560

CGCTTATAAG TGCCAAGCAT GCAGTGATAA AAATCCGAGT GATAAAATCG TGAAAGCTCC       1620

TATTCCTAAA GCCCCTTTGG CGCATAGCCT TGGCTCAGCT TCTATTATCG CTCACACCAT       1680

CCATCAGAAG TTTAATCTGA AGGTACCCAA TTATCGCCAA GAAGAAGATT GGGCTAAGAT       1740

GGGTTTACCA ATCACACGTA AGGAAATTGC TAATTGGCAT ATCAAGGCGA GTCAATACTA       1800

TTTGGAGCCC CTTTATAATC TTTTACGAGA AAAGTTGTTA GAACAAGCTC TTCTTCATGC       1860

GGATGAAACC TCTTATCGGG TTCTAGAGAG TGATAGTCAG TTGCCTTACT ATTGGACTTT       1920

TTTGTCTGGG AAAGCTGAGA ATCAAGCAAT CACGCTGTAC CACCATGATC AGCGTCGGAG       1980

TGGTTTAGTA GTACAAGAAT CCTAGGAGA TTATTCTGGC TATGTTCATT GTGACATGTT       2040

GCGGCAGTAA CTTAGGACTT TAGTCCTCTA GTTCTGCCTA TGCGATAGCA GTCCAAGGTT       2100

TAGGAGTAAG GCGACGCTAA GCTTGGTAAA CTGCGAACAG CTAGAAGCTT ATCGTCAACT       2160

GGAAGAAGCT GCACTTGTTG GATGTTGGGC GCATGTGAGA AGGAAGTTTT TTGAAGTGCC       2220

CCCCAAGCAA GCAGATAAAT CATCCTTAGG AGCTAAAGGT TTAGCTTATT GTGATCAGTT       2280
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                                1278
ATTTTCCTTG GAAAGAGACT GGGAGGCTTT GCCAGCTGAT GAACGACTAC AGAAACGTCA      2340

AGAACATCTC CAGCCCCTAA TGGAAGACTT CTTTGCTTGG TGCCGCCGTC AGTCAGTTTT      2400

AGCAGGTTCA AAACTAGGAA GGGCAATTGA ATACAGCCTC AAGTATGAAG AAACCTTTAA      2460

GACTATTTTG AAAGACGGAC ATCTGGTCCT TTCCAATAAT CTAGCTGAAC GCGCCATTAA      2520

ATCATTGGTT ATGGGACGGA GTAAAAGAGT CCAGTGGACT CTTTTAGCCT GAGCTCAGTT      2580

TAAAAAAGCG AGGGTGGTTA TTTTCTCAAA GTTTTGAAGG AGCTAAAGCA AGAGCTATTG      2640

TTATGAGCTT GTTGGAAACA GCTAAACGTC ATCAATTATA GTGCGTTGAA TCTATAACAG      2700

TACGCATCGA CTGCTAAAAC ATTTCTATAA ATCAATTTTC CTTTCCTAAT CGATTTGTTC      2760

ATATCTTATT TCAATCCATT ATAAATAGCG AGAAATATCT ATCCTATCTT CTAGAATGTC      2820

TTCCAAACGA GGAAACTCTC GTAAACAAAG AGGTTTTAGA GGCCTATTTA CCGTGGACTA      2880

AAGTTGTACA AGAAAAGTGC AAATAAGAAA TCTCCAGATT AGGAACTATC CGTGAGTTCT      2940

CTAGTCTGGA GATTTTTCAA TAGACTTCGT TATTGGACGG TTACAATTTA TTATATGAAA      3000

ATCCCATATT ATTCTCCAAT TCTATATTTT ACCTTTCTAA ATGTATAGAT TAACTACCTA      3060

ATTATAGCAT ATAACGCAGA TTCCTTTCAA TCGTATGATT TACTGCATTA AATTAAGTAA      3120

AAAAATAAAG GCAGTCCGAA GACTGCCGAT ATTTATCTCT CATCTCTTTA ATTATGGTAA      3180

GTAAATAAAT AATTTCCCTA AAGATATGGA AATTATTAAT ACTATAAATA CATATTATAA      3240

AGTTTATAAA TACTGTAAAA ATCCTGAAGT TAATTTTCTA ATAAATATCA ATATGTGTTA      3300

GTATCTTTTA AATTTTTAGA CAATTTACTA GTTCTATAGA CATGTTTAAC AGACTCTATT      3360

TTACAATTCA AAAATTTCAT CTGCCACTTC ATTTAAAAAT TCTATATCAT GGGAAACAAT      3420

AAAAATTATT TTATCCATGG TTTTATACTT ATTAATCAGT TCAGATATTT TTATCATATT      3480

GGAATAATCC ATACCACTTG AAGGTTCGTC AAAAAAGACA AATGGAGAAT TCTTGCACAT      3540

AACAGATGCT ATTGCAAGCC TTTGCTTTTG CCCTCCTGAT AAACTCATCG GATGCCTTTC      3600

AATAAATTCG TCCAGGCATA AATCTTTTAA CCCAAATCAT TCATACCTCT CTCAACTAGA      3660

TGTAACTTAC AAAACCCCTG ACCTCATGAG CCACTTTCTT CCTCCTCATG AGGTCAGTTT      3720

TACTTTCTGC TGTTCCAGTA TCGTTTTTCC TCGCTAGATT TCCTCAAAAG GGCAGACTCC      3780

TCCCTTGGTT CGTCACACGA TTTTTTCATC TCGACTGTTC TTTAATGCAT CATTAACGAC      3840

GCTTTTCTTC TAGGTGGTTC ATAAGGAACA GGAAGATTCA GGTTGACTTT TCTAATCCTA      3900

GAATAAAGTG CTGAAAACAA TTCGGAATAG GCATAGAGAC TAGACAATTT GAGGAGCTGC      3960

TTGCGTCCTG TTCGAACACA TTTTCCCACC ACGTGAAGAA AAAGATGGCG                 4010
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(2) INFORMATION FOR SEQ ID NO: 254:

1279

(i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2789 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 254:

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ATGCATCCGT TTGTCAAGCC TAAATTGTAA TTTTTTTCAA TTTAAAACAG AAAAACCCAG        60

GAAAATGACA TAAAAATATC ATTCCTAGGC CTATTTATGC TATTTCTCTC TGAAAAATAT       120

GAGTATTCAG TCGGTCAAAT GAAGCTGAAC GAACTCATTT TCCCTCGCCT AATTCAATGA       180

TTCGATGACA TTGTTGGGCT ACATAAGCAT CGTGGGTCAC GATAATGACT GTTTTCCCCT       240

CTCGATTCAT CTCTAAGAGA AACTTCAAGA CCAAATCTCT ATTTTCAGGA TCCAGAGAAC       300

CTGTCGGTTC ATCGGCTAAA ATCAGCTGGC TGGGTTTTAA GATGGCTCTA GCAACTGCAA       360

TTCGTTGTTG TTCGCCCCCA GACAACTCGG AGACCCTTTG ATGCAAAGTA GCTGATAAAC       420

CTACTCTCTC TAAAATCTCT TCCACCTTTT TGAGCTTGTC TTTCTTAGGC AATTTCACAT       480

ATTTCAGCGC CACATGAGAT TGTACTCGAC CGTTTCATCA TCAATCAGGG CAAAATTTTG       540

AAACAGATAA GAGATATGTT CACGGATTAT TGTTTGCGAC TTAGCAGAAT TAACCGCTAG       600

ATTTGTCTCA CCAAAAATCT CATACCGTCC GCTATAATCA CCATCTATCA AACCCAATAA       660

ATTTAACAAG GTCGACTTCC CACTACCACT CTTACCAACA ATAGCTACCA AATCCCCCTG       720

ATCAATCCTG AGAGATAAGT TATCCAAAAT CACTTTTCCC CCAATGGTTT TGGTAATATT       780

TTTCAACTCA ATCATAAGAT GCCCCCTTTC AATAACTCTA CTAGACTTCT TTTCTCCATC       840

CTAGAAGCTA AGCCTAGCAC AAATAGTATA TCCAGACATG TAAAACCTGC AAACAGTAGA       900

AGTGGTAAGA ACGCATGGGC AAAGAAAATC AAGACTAGAA GAGGGAAACT ATAGCCCAGC       960

AAGAGCAGAA CGAGGAGAGG ACGGTAGCGA TCGACCAGTT TCCACCCCAT AAACTTCTTG      1020

GTAATGATAT CCCTGCGCTT CAATAAGAAA GTTGTTACTA GTAAGAAGTA GGAAATCATC      1080

ATGCTAAGGA GACCAAACAA AGCAAAGAGT AGGTTAAAAT TCCGAACAGC ATCTCGATAA      1140

GAATCCACTT TCTCTTGTTG AATGGCTTGA ATAGATGAAA ATTTTAAATA ATTTCCATCT      1200

GACAATTTCT CAACTAACTC TGTAATCTCT TTTTGATGTT GAACCGTATT TTCAATTTTA      1260

ATCGGATTAT TTAAGCCAGT TGTTGACAGG GAGGCTTTCT CATCCCACAT CATATCAGAA      1320

TCATTGACCA AGCTAATAAT TGGATTGGAG AGATTTTCCT TTCGCTTATC ACTATATGGG      1380

AAAAATGACC AATCTCCTTC ATAATAGGCA ATCTCGACAT CCATCTCCTC TATCGTTCGT      1440
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                                      1280
TTTTGCTGCT CTTCATACTT CATCGAATGA AAGGCAATTA ACTTCCCCAA GAGCTGATTT   1500

TTATCTTCTT CACCTTTCGT ACTTGCTGGC ATCAAAATAA CTTTTTTAAT ACCGGTATTT   1560

GGTAGCTTGA ATCCCTTGCT CTTTAGAAAA TTGCGATTGG CATAGTAAAC ATCCACCGTA   1620

TCTGTTAACT GATATTGCTG AATCTGTTCT GATTGGACAA AATTTTTTAC AGGAAGACTG   1680

CTACTCTGCA CATAGCCCGC CTGCGTTTTT TCTACCAAAT CCTGATAAAA TCGATAGAAA   1740

TAATCTGTAG ATTTCCCTGA CCCTGCTAGC TCTTCTTGCC ACAGATTATC ATTGAGTTTG   1800

AAGGTTTCTA AGGTCAGGTA ATTACCTTGA CTTACCCACT GTTGCTGATA AGCAAGTTCT _   1860

TTGTTTTCTT GTTCTAAACT TCTGCCCACC CCAATCAGTA AGGCCGTCAG TAAAATAGTT   1920

GTCCCTATTT TCATCACATA ATTGAAGATA AGACCAAATT TGAAAGATGA AAAACCTTTC   1980

AGCAGAGAGC TGATTGTCAT TTTTTGGATT AAGAGGTAAG TCAACCAACT GATAAAGAGA   2040

TAAAGCTGCA ACAGCAAAAA ATGAGACAAC CACAGCATAG GAAACAAATC TTTTGGCTTA   2100

TAATCAAGCA AGAAAAACAC GCCTAGATTG ATCACAAGAG CCCCACCTAG GAGGAGGTAA   2160

AGGTTGCCTT TTACAACATC AGCTAAAACA GCCCTATCTT GAAAACCAAG TAATTTTTGT   2220

ACCCCAACTC TTTTCATCTC CATCATCGGT TGATACACTG TCACTAACAC AAGAAGCAAA   2280

ATAGCCAAGA CAAAAACAAT GGCAGATAAA AGCAAATCTC GATTTATGAC TTCCACTGCA   2340

CTTTTGTAGG TCGGCTCTAG CAAGGTAGCC TGGTCTATCT TGAAAAAATC GCTCCATTTC   2400

TGTACAATCC TATCCTTGTC CATCTCTTGT GTAGAAGTTA TCGTATAGCG ACCATTTAAA   2460

CTACGAGATG TATCCTTGAT ATAGGTTTGA AAAGTCATAA GCTGAATAGG TTTGGCTTTT   2520

AGAAAGGTCG GAATCGTACC AAGTTTATTG GAAATTTCTT TATTACTATA GACTCCTTCA   2580

CCATCTGTGG TAAAATCAAG AGAAGAAATC CCAAACTCTT GGTAGGGGAA GGTATCTTTA   2640

TCAAAAACAC CAGACTTGAC CACCTCATCA CCACTGTCTG TTTTGATGAT GGAGACTTTA   2700

TACTCCTTTG ATACATCCTC AAAAAATCGA AGAACAGACG CTGCAGGTTC GTTAATATCT   2760

TTCAAATACA AATCCAAAGA ATCTACAGG   2789

(2) INFORMATION FOR SEQ ID NO: 255:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 2495 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 255:

CTGCGAATTT TATTAAAGAT AATGTGTTAA TTACAGCGGC TCACAACTAC TACAGACATG   60

1281

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ACTATGGGAA AGAAGCGGAT GATATTTATG TTCTTCCGGC TGTTAGTCCA AGTCAAGAAC    120

CATTTGGAAA GATCAAAGTA AAGGAAGTTC GTTATTTGAA GGAATTTAGA AATTTAAATT    180

CTAAGGATGC AAGGGAATAT GACTTGGCTT TATTAATTCT AGAAGAGCCC ATTGGTGCAA    240

AATTAGGGAC TTTGGGTCTT CCTACTAGTC AAAAAAATTT GACAGGAATA ACTGTGACTA    300

TCACAGGCTA TCCATCATAT AATTTTAAAA TTCATCAAAT GTATACAGAT AAGAAACAAG    360

TTTTAAGTGA TGATGGCATG TTCTTGGATT ACCAAGTTGA TACTTTAGAG GGGTCTAGTG    420

GATCTACAGT TTATGATGCT AGTCACCGTG TAGTAGGAGT GCATACTTTA GGAGATGGAG    480

CTAATCAAAT TAACAGTGCA GTTAAATTAA ATGAACGAAA TTTGCCATTT ATTTAwTCGG    540

TTCTTAAAGG TTACTCTCTT GAAGGATGGA AGAAAATAAA TGGTAGTTGG TACCATTATA    600

GACAACATGA TAAACAAACG GGTTGGCAGG AGATAAATGA TACCTGGTAT TATTTAGACA    660

GTTCCGGTAA GATGCTTACA GATTGGCAAA AAGTCCATGG AAAATGGTAT TATCTCAATT    720

CAAATGGAGC AATGGTTACA GGTAGCCAAA CTATCGATGG TAAAGTTTAT AACTTCGCTT    780

CATCTGGTGA GTGGATTTAA TGTTGGAGGA TATATAAAAT GAAGCTTTTG AAAAAAATGA    840

TGCAAATCGC ACTAGCCACA TTTTTCTTCG GTTTGTTAGC GACAAATACA GTATTTGCAG    900

ATGATTCTGA AGGATGGCAG TTTGTCCAAG AAAATGGTAG AACCTACTAC AAAAAGGGGG    960

ATCTAAAAGA AACCTACTGG AGAGTGATAG ATCCCAACTA CTATTATTTT GATCCTTTAT   1020

CCGGAGAGAT GGTTGTCGGC TGGCAATATA TACCTGCTCC ACACAAGGGG GTTACGATTG   1080

GTCCTTCTCC AAGAATAGAG ATTGCTCTTA GACCAGATTG GTTTTATTTT GGTCAAGATG   1140

GTGTATTACA AGAATTTGTT GGCAAGCAAG TTTTAGAAGC AAAAACTGCT ACGAATACCA   1200

ACAAACATCA TGGGGAAGAA TATGATAGCC AAGCAGAGAA ACGAGTCTAT TATTTTGAAG   1260

ATCAGCGTAG TTATCATACT TTAAAAACTG GTTGGATTTA TGAAGAGGGT CATTGGTATT   1320

ATTTACAGAA GGATGGTGGC TTTGATTCGC GCATCAACAG ATTGACGGTT GGAGAGCTAG   1380

CACGTGGTTG GGTTAAGGAT TACCCTCTTA CGTATGATGA AGAGAAGCTA AAAGCAGCTC   1440

CATGGTACTA TCTAAATCCA GCAACTGGCA TTATGCAAAC AGGTTGGCAA TATCTAGGTA   1500

ATAGATGGTA CTACCTCCAT TCGTCAGGAG CTATGGCAAC TGGCTGGTAT AAGGAAGGCT   1560

CAACTTGGTA CTATCTAGAT GCTGAAAATG GTGATATGAG AACTGGCTGG CAAAACCTTG   1620

GGAACAAATG GTACTATCTC CGTTCATCAG GAGCTATGGC AACTGGTTGG TATCAGGAAA   1680

GTTCGACTTG GTACTATCTA AATGCAAGTA ATGGAGATAT GAAAACAGGC TGGTTCCAAG   1740

TCAATGGTAA CTGGTACTAT GCCTATGATT CAGGTGCTTT AGCTGTTAAT ACCACAGTAG   1800
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1282

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GTGGTTACTA CTTAAACTAT AATGGTGAAT GGGTTAAGTA ATGAAGGCTA ATTGTAAACT        1860

GTGATGGATA CTTAACTTTG TATAATAGGT GGATAAAAGT CTTCACAATC AAAAAACGCA        1920

TAGTATCAAG GTTTTTCTGT ACTGCCCTCA AACAGTTAGA CAATTAATTT ATCCGAAGgA        1980

TTTAGTTCTG TATTGCACAG GGCTAAGTCC TTTTAGTTTT ACCTTAATTC GTTTATTGTT        2040

GTAGTAATCA ATATAGTCTA TAATGGCTTG TTCCAATTGC TTAAGCGACT GAAACGACTT        2100

CTCATAACCG TAAAACATTT CCGATTTCAG AATCCCAAAG AAGGACTCCA TCATACTATT        2160

GTCTGGGCTG TTTCCCTTAC GTGACATGGA TGCTTGAATT CCCTTACTCT CTAGGAACCG        2220

ATGATAAGAA TCGTGTTGGT ATTGCCAGCC TTGGTCACTA TGGAGAATCG TATTCTCGTA        2280

GTGCTTCTCT GTGAATGCCT GTTCCAACAT TGTTTGTACT TGTTCTAAGT TGGGTGAAGT        2340

TGAAAGATTA TAGGCGATAA TTTCGCTATT AAAGCCATCT AAAACTGGTG ATAAGTAAAG        2400

CTTTTGAGTA CTTGCTGGAA TGGCAAATTC TGTCACATCT GTGTAGCACT TTTCCATTGT        2460

TTTAGAGCCT TCAAATTGGC CTTGAATGAG ATTCG                                    2495
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(2) INFORMATION FOR SEQ ID NO: 256:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 870 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 256:

```
TACCACCGTA TTCATCCAGC AAGATTGCCA TTTGTCTTTG GGTATTTCGC AGTTCTTTTA          60

GCAAGTCATC CACAAAAATA GTTTCAGGTA CAAAAAGTGG ATCTTGTAAA ATTCTCTTCC         120

AAACAATATT GTCAAAACCG TCCACAAAGC CTGCCTTAAG GAGACTCTTG GTGTGAATGA         180

TTCCAATTAC ATTGTCCTTA TCCCCATCAT AAACCGGGAT ACGAGAATAA TTTTGTTTTA         240

AAATACTTTG GATAATGGCT TGACTATCAT CCTGAATATC CACCATAAAG GCATCCGTTC         300

GAGGAACCAT AACCTCTCGT GCCATCAGTT CATCGAGCGA AAAGACACCT TGTAGCATCT         360

CAATCTCATC AGCATCCAAT GTTTCTTCAC TATTTGTCAG CATATAGGCA ATTTCATCAC         420

GGGTCATCTT TTCATCCGCA TCATCGAATG ACATAGGAGT CAAATGGCTC AAGAAATTGG         480

TCGAAGCAGC TAAAAGCCAA ACAAAAGGAC TGACTAGTTT TCCGATCCCA ATGATAATCG         540

GCGCTGTACG AATTGCCAAG GCATCCTTTA GATTAAGAGC GATTCTCTTA GGATATAATT         600

CCCCAAAAAC GATGGAAATA TAGGTCAAAA ATGCCAAGGA TAGAAAAGTT GCCACGGCTT         660

GTGCTGTTTC GCCATTCCCA AGCCAAGAGG CAATCACACG TCCTAGAGTA TCAGTTAAAC         720
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1283

TCGCCCCTGA TAAGATTGTA ATCAGGGTGA TTCCTACCTG GATGGTTGAT AAAAAGTGGT   780

TAGGATTTTC TAGTACCTTC AGCAGGCGGA TGTAGCGTCT GTCTCCTTCT TCCGCCTTTT   840

GTTCAACTCG GGCACGATTA AGAGAAACGG   870

(2) INFORMATION FOR SEQ ID NO: 257:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 1245 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 257:

CGTTCCCAGA AGCCCGCATT CTCATCGCCA ATGTCGTGAT TGATTTGGCC CTTTCTCCAA   60

AATCCAACTC AGCCTATGTA GCTATGGATA AGGCACTTGC TGACCTCAAA ACATCAGGGC   120

ACTTGCCTAT TCCGCGACAC CTGCGTGATG GGCACTACAG TGGAAGCAAG GAACTGGGGA   180

ATGCCCAAGA CTATCTCTAT CCACACAACT ATCCTGGAAA TTGGGTCAAG CAAGACTATC   240

TGCCAGAAAA AATTCGTAAT CATCACTATT TCCAAGCAGA AGATACTGGT AAATATGAAC   300

GGGCTTTGGC TCAAAGAAAG GAAGCTATCG ACCGTTTGCG AAAAATCTGA AATCCTTTTC   360

AAAAAATTGC ACTTTCCTCT TGATTTTTTT TGAAAAAGTC CTATCATATA AATATAGAAA   420

CGCTGTGGTG TACGACTTCA CACTTAAGTG TTGACCGACT ATTTTTTGTA TTATTAGGGA   480

AACAAAAGTC TTCTAACAGC ATGTAGGCCG TCTCACACGG AAACAGCTTC AGTTAGAGCG   540

AGTTGCCCAC CTGCTTAATT GCGCGGGTTC AATACAAACC GTGAAGTTTG GGCACCAATA   600

CAGCTTTTTT CTTTGCCTCC TTAGCTCAGC TGGCAGAGCA GCGGACTCTT AATCCGTGGG   660

TCACAGGTTC GATCCCTGTA GGGGGCATAT AAATACAACA GGAAAAGCCT TATAATATAG   720

GGCTTTTTTT GCTTTCCTTT TAAAAATTGT CGTGCAATTT GCCGTGTTTT TACAACAAAC   780

TTTTCACAGC CATAAACTCC TCACTAATTT TTTCCTCCAA GGTATGCCCA TAAACGTCAA   840

TCAACATGGA GATATCTTTA TGTCCTAAAA TTTGGCTCTT TGTCAACTGT AGTGGGTTGA   900

AGTCAGCTAA GCTCGAGAAA GGACAAATTT TGTCCTTTCT TTTTTGATAT TCAGAGCGAT   960

AAAAATCCGT TTTTTGAAGT TTTCAAAGTT CCGAAAACCA AAGGCATTGC GCTTGATAAG   1020

TTTGATGAGA TTATTGGTCG CTTCCAATTT GGCGTTAGAA TAGTGTAGTT GAAGGGCGTT   1080

GACGATTTTC TCTTTGTCCT TTAGAAAGGT TTTAAAGACA GTCTGAAAAA GAGGAGGAAC   1140

CTGCTTTAGA TTGTCCTCAA TGAGTCCGAA AAATTTCTCC GGTGCCTTAT TCTGAAAGTG   1200

1284
AAACAGCAAG AGTTGATAGA GCTGATAGTG ATGTTTCAAG TCTTG   1245

(2) INFORMATION FOR SEQ ID NO: 258:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1684 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 258:

ATGCCTATGT AACTCCACAT ATGACCCATA GCCACTGGAT TAAAAAAGAT AGTTTGTCTG   60

AAGCTGAGAG AGCGGCAcCC AGGCTTATGC TAAAGAGAAA GGTTTGACCC CTCCTTCGAC   120

AGACCATCAG GATTCAGGAA ATACTGAGGC AAAAGGAGCA GAAGCTATCT ACAACCGCGT   180

GAAAGCAGCT AAGAAGGTGC CACTTGATCG TATGCCTTAC AATCTTCAAT ATACTGTAGA   240

AGTCAAAAAC GGTAGTTTAA TCATACCTCA TTATGACCAT TACCATAACA TCAAATTTGA   300

GTGGTTTGAC GAAGGCCTTT ATGAGGCACC TAAGGGGTAT ACTCTTGAGG ATCTTTTGGC   360

GACTGTCAAG TACTATGTCG AACATCCAAA CGAACGTCCG CATTCAGATA ATGGTTTTGG   420

TAACGCTAGC GACCATGTTC AAAGAAACAA AAATGGTCAA GCTGATACCA ATCAAACGGA   480

AAAACCAAGC GAGGAGAAAC CTCAGACAGA AAAACCTGAG GAAGAAACCC CTCGAGAAGA   540

GAAACCGCAA AGCGAGAAAC CAGAGTCTCC AAAACCAACA GAGGAACCAG AAGAATCACC   600

AGAGGAATCA GAAGAACCTC AGGTCGAGAC TGAAAAGGTT GAAGAAAAAC TGAGAGAGGC   660

TGAAGATTTA CTTGGAAAAA TCCAGGATCC AATTATCAAG TCCAATGCCA AAGAGACTCT   720

CACAGGATTA AAAAATAATT TACTATTTGG CACCCCAGGAC AACAATACTA TTATGGCAGA   780

AGCTGAAAAA CTATTGGCTT TATTAAAGGA GAGTAAGTAA AGGTAGCAGC ATTTTCTAAC   840

TCCTAAAAAC AGGATAGGAG AACGGGAAAA CGAAAAATGA GAGCAGAATG TGAGTTCTAG   900

TTCTCATTTT TTTCATGAAA ATGTGCAAAA TATAGTAGAT TGAAACTAGA ATAGTATACC   960

TCTACTTCTA AAACATTGTT AGAAATCGAT TTGACTGTCC TGTTCTTATT TCATTTTACT   1020

ATATCTTAAC AGATAGTGTA AATAAAGATA AACTATTTAC TGGCTAATTA ATCAGTTAAA   1080

CACTAGTTAA GGAGTAATGA TGAAAAAAAG AACAATACTA TTATTGATGG CCAGTCTGTT   1140

AGCTCTTGTC TTAGGAGCAT GTGGTTTCTT GGACATATTG ATCCTGGATC ATTCTCATCA   1200

GGATTACTCT TTACTGCTAT TTTAGAAACT GGGGTGGTTT GATGGAAAGT ATTGGTCTTG   1260

TTATCGTTTC ACATTCCAAA CACATTGCAG AAGGTGTTGT TGAACTGATT AGTAAAGTAG   1320

CTAAAGATGT TCCGATTACT TATGTAAGAG GAACCGAGGG CGGAGGAATT GGAACGAGTT   1380

1285

TTGAACAAGT AGATAGGGTT GTTTCCGAAA ATCCAGCAGA TACTTTACTT GCCTTTTTTG   1440

ACCTAGGTTC TGCTAAAATG AACTTAAAAA TGGTGACTGA TTTCAGTGAT AAAAGTATCA   1500

TCATCAACAG GGTTCCAATT GTAGAAGGTG CCTATAATGC AGCTGCTCTT CTTCAGGCTG   1560

GTGCAGAACT GTCAGTTATT CAAACACAGT TaGCGGAgCt TGAAATCAAT AAATAAGGAA   1620

TTTTACTATA ACTCTTTTTA TAGATAAGCT ATTGaTTATC TCAACTATAA TAATGTTAAG   1680

TnAA   1684

(2) INFORMATION FOR SEQ ID NO: 259:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 970 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: double
       (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 259:

AGGAGTGGAG AnATATGAAG ACACAAATTT TCACATTATT GAAAATCGTT GCTGAGATTA   60

TTATTATTTT GCCATTTCTA ACTAATCTAT AAGTTCTTTA TATTGCTGAA AACGCAATTC   120

AAAAAGGGCT ATTAATTGTG GATTTTCTAA TACCTGCAGA GATTGGATAA AGCGTTCAAT   180

CTCTTTTTGA TTGCTTCCCT TTGTTTGAAG AAAGACACTC ATCTTCTTTA AAAATTGCCA   240

CGATACTTTT TCAAAAACAT CATACGGTCG TAACATCCTC TCCAACTCGG CTTCGAAGAT   300

TGGGATGTAG GAGAAAAGTT TTCGCTCCAT GAGTTCTGAT AAGATATTTA AGAGTCCTTG   360

CTTCATATAC AATCGATTGT GTACTAACTC TTTAAATTCT TTGGATTTTT CGAGTAAGGA   420

GGTTGATAAA AAAATCAGAT CTTGATTGCT CAAGAAGGGC ATGGTATTGC AAAAGAGATA   480

GAGTTCAAAC CAGGTCCAAG ACTCGATAGC ATAGAGATAG GTGGTCAAAA ACTCGCTATC   540

CTCCTCTGCT AGTGGGTAGC TTTTATTTAG TGAATGGATG GCATCTTTAA TCACGATGGC   600

ATTCAAACGA CGATAGGTCT GCGCCATCTG TTCTTGATCG ACTTCCTCCA ATAGCTGCTC   660

TAAAGCAGCT ATATCCTGAT GGGCAAAGCG ATTCACAACC TTTCGACCGA TTCGCATATG   720

TGGAGATTCT TGATAGTTGT TGAGCTTGTG CCCAAACTCA TCAAAGGTCA CATTTATACC   780

TTGGATAGCT AGAATCAACT TATCCGCAGA CAGCATAGAC TGCCCTAGTT CAAACTTGGA   840

CAACTGAGAA GCTGTTAGAC CCTCACAAGC CACATCTGAC TGCTTGAGCT TTCTCGCCAA   900

ACGTAATTCC TTGTAAAATT CCCCCAGTTC CATTCTCTCA ATCATCTGAC CACCTCCTAG   960

CTTTTGCAGG   970

1286
(2) INFORMATION FOR SEQ ID NO: 260:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2996 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 260:

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GTTGACCACG GGTAAAACTA CCCTAACTGC AGCTATCACA ACTGTTTTGG CACGTCGCTT        60

GCCTTCATCA GTTAACCAAC CTAAAGACTA TGCGTCTATC GATGCTGCTC CAGAAGAACG       120

CGAACGCGGT ATCACTATCA ACACTGCGCA CGTTGAGTAC GAAACTGAAA AACGTCACTA       180

CGCTCACATC GACGCTCCAG GACACGCGGA CTACGTTAAA AACATGATCA CTGGTGCTGC       240

TCAAATGGAC GGAGCTATCC TTGTAGTAGC TTCAACTGAC GGACCAATGC CACAAACTCG       300

TGAGCACATC CTTCTTTCAC GTCAGGTTGG TGTTAAACAC CTTATCGTCT TCATGAACAA       360

AGTTGACTTG GTTGACGACG AAGAATTGCT TGAATTGGTT GAAATGGAAA TCCGTGACCT       420

ATTGTCAGAA TACGACTTCC CAGGTGACGA TCTTCCAGTT ATCCAAGGTT CAGCACTTAA       480

AGCTCTTGAA GGTGACTCTA AATACGAAGA CATCGTTATG GAATTGATGA ACACAGTTGA       540

TGAGTATATC CCAGAACCAG AACGTGACAC TGACAAACCA TTGCTTCTTC CAGTCGAGGA       600

CGTATTCTCA ATCACTGGAC GTGGTACAGT TGCTTCAGGA CGTATCGACC GTGGTATCGT       660

TAAAGTCAAC GACGAAATCG AAATCGTTGG TATCAAAGAA GAAACTCAAA AAGCAGTTGT       720

TACTGGTGTT GAAATGTTCC GTAAACAACT TGACGAAGGT CTTGCTGGAG ATAACGTAGG       780

TGTCCTTCTT CGTGGTGTTC AACGTGATGA AATCGAACGT GGACAAGTTA TCGCTAAACC       840

AGGTTCAATC AACCCACACA CTAAATTCAA AGGTGAAGTC TACATCCTTA CTAAAGAAGA       900

AGGTGGACGT CACACTCCAT TCTTCAACAA CTACCGTCCA CAATTCTACT TCCGTACTAC       960

TGACGTTACA GGTTCAATCG AACTTCCAGC AGGTACTGAA ATGGTAATGC CTGGTGATAA      1020

CGTGACAATC GACGTTGAGT TGATTCACCC AATCGCCGTA GAACAAGGTA CTACATTCTC      1080

TATCCGTGAG GGTGGACGTA CTGTTGGTTC AGGTATGGTT ACAGAAATCG AAGCTTAATT      1140

CGATTTAGTT CCCAGAAGAA CAATTATTTA AGTTAGACAC TAAAAGAATC TTGCTTGGCA      1200

AGGTTCTTTT TTTAGATATT GAACTAATAC TCAATGAAAA TCAAAGAGCA AACTATAATA      1260

TATTGAAACT AGAATAGTAC ACATCTACTT CTAAAACATT GTTAGAAATC GATTTGACTG      1320

TCCTGATCGA TTTGTCTTGT TCTTATTTCA TTTTACTATA GAAAGTTAGC TACAGACTGC      1380

TCAAAACATT GTTTTTAGGT TGTAGATAGA ACTGACGAAG TCAGtAACAT CTATACGACA      1440
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1287

AGGCGAAGCT GACGCGGTTT GAAGAGATTT TCGAAGAGTA TAATACTAGA CTAAAATCAA   1500

AAAGCATTAT ACAATAGTAA TATGAAATCA ATTAAAGAAG AAATCCAAAC CATCAAAACA   1560

CTTTTAAAAG ACTCTCGTAC AGCTAAATAT CATAAACGCC TTCAAATCGT TCTATTTCGT   1620

CTGATGGGCA AATCTTATAA AGAGATTATA GAACTTTTAT AGTGGTTTGA AATAAGATGT   1680

GAACAACTCT ATCAGGAAAG TCAAACTAAT TTATAGAAAT ATTTTAGCAG CCAAGGTGTA   1740

CTGTTATAGA TTCAATACAC TTTAGACTGT AATCAAACAA CGATTTGGCG AAATGTAAAA   1800

AATATGAGGA GTTCGGACTC GACTCTCTCC TTCAAGAAAC ACGTGGTGGT CGTAACCATG   1860

CTTATATGAC GGTTGAGCAA GAGAAAGTCT TTCTTGCCCG CCATTTGAAG GCTACAGAGG   1920

CAGGAGAATT TGTTACAATT GATGCCTTAT TTCAGGCTTA TAAAAAGGAG TTAGGTCGTT   1980

CCTACACACG TGATGCCTTC TATCAACTGT TGAAGCGCCA TGGTTGGCGA AATATTACGC   2040

CACGTCCAGA ACATCCTAAG AAAGCAGATG CTCAAACCAT TGTCGCGTCT AAAAATAAAG   2100

TCTCAATTCA AGAAGACAAG TGAACTGCAC CCCAAAAGTT AGACAGAAAA AATCTAACTT   2160

TTGGGGTGTT TTTATTATGA AATTAACTTA TGATGATAAA GTTCAGATCT ATGAACTTAG   2220

AAAACAAGGA TATAGCTTAG AGAAGCTTTC AAATAAATTT GGGATAAACA ATTCTAATCT   2280

TAGGTACATG ATTAAATTGA TTGATCGTTA CGGAATAGAG TTCGTCAAAA AAGGAAAAAA   2340

TCGTTACTAT TCTCCTGATT TAAAACAAGA AATGATTCAT AAAGTCTCAC ATGAAGGCTG   2400

GACTAAAGAT AGAGTTTCTC TTGAATACTG TCTCCCAAGT CGTACGATAC TTCTTAACTG   2460

GCTAGCACAA TACAGGAAAA ACGGGTATAC TATTGTTGAG AAAACAAGAG GGAGAGTACC   2520

TGAGAGCGGA GAATGCCATC CTAAAAAAGT TAAGAGAACT CCGATTGAAG GAGGAAAAAG   2580

AGAAAGAAGA AAGACAGAAA TTATTCAAGA ATTAATGACT GAGTTTTCGT TAGATATTCT   2640

TCTAAAAGCC ATTAAACTAG CTCGTTTGAC CTACTACTAT CACTTGAAAC AGCTAGATAA   2700

ACCAGATAAG GACCAAGAGC TTAAAGCTGA AATTCAATCC ATTTTTATCG AACACAAGGG   2760

AAATTATGCT TATCGTCGGA TTTATTTAGA ACTAAGAAAT CGTGGTTATC TGGTAAATCA   2820

TAAAAGAGTT CAAGGCTTGA TAAAAGTACT CAATTTACAA GCTAAAATGC GACAGAAACG   2880

AAAATATTCT TCTCATAAAG GAGACGTTGG CAAGAAGGCA GAGAATCTCA TTCAAGGACA   2940

ATTTGAAGGC TCTAAAACAA TGGAAAAGTG CTACACAGAT GTGACAGAAT TTGCCG   2996

(2) INFORMATION FOR SEQ ID NO: 261:

    (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 837 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: double

1288
                     (D) TOPOLOGY: linear

            (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 261:

CTTATCAACT CCCGACATGG CTCTCAGACC AATCCAAATC CCTAAAAAAA TCAGAACAAG   60

GATGGTGGTC AAGATCAAAC TCTCGAAATA TAAAGAAAAT AGTTGCAGTA GCATGATTTC   120

TCTCATTTCT ATCTTTTTTA AAGAGTAAAC TCAGCTAGTC CAACTAACTG AGTTTTCCTT   180

TATCTATTAT ATCAAATATA AGTCCGTTTG TAACTAGCGA AGAATTCTTT TGTCCGCTCT   240

TCTTTAGGGG TGTGGATAAT CTCATCCGGA GTTCCAGACT CGATGATTTT CCCCTTATCT   300

AAGAAGAGAA TTTTATCCGC AACTTGGGCT ACAAAGGACA TGTCATGACT GACCAAAATC   360

ATGGTCTGAC CTGACTTAGC AGCATCTGCA ATAGACTTTT CTACTTCACC GACCAATTCT   420

GGGTCAAGGG CTGAAGTTGG TTCGTCTAAG AGCAAAACAT CTGGTTTCAT AGCAAGCGCA   480

CGCGCTAGGG CAACCCGTTG CTTCTGTCCA CCTGATAAAT GGCGAGGATA ATGGTTTTCA   540

CGGTCCGAAA GCCCAACCTT AGCCAACTCT TCCTTGGCAA TCTTAGTCGC TTCTTGGTCA   600

GATAATTTCT TGACAACAAC CAAGCCTTCT TTCACATTAT CAAGTGCTGT TCGGCGTTCA   660

AACAAATTAA ACTGTTGGAA AACCATAGAC AACTTACGAC GTAGGGCAAG GATTTCTTCT   720

TGAGTGATTT TAGAAAAATC AACTGAAAAA CCATCAATCT GAATAGAGCC ACTGTCAGGT   780

GTTTCTAGAT AATTGAGACT GCGAGAAAGG TTGATTTTCA GCTCTGAAGA CCAATCA   837

(2) INFORMATION FOR SEQ ID NO: 262:

            (i) SEQUENCE CHARACTERISTICS:
                 (A) LENGTH: 868 base pairs
                 (B) TYPE: nucleic acid
                 (C) STRANDEDNESS: double
                 (D) TOPOLOGY: linear

            (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 262:

CCGAACAAAA TGGGCTAATT AGATTATAGT AAGAAAGGTA AGTTAAAAAT GAGAATTGCA   60

ATTGGATGTG ACCACATCGT AACTGATGAA AAAATGGCGG TTTCAGAATT TTTGAAATCA   120

AAAGGATATG AAGTCATTGA CTTTGGTACC TATGACCATA CACGGACTCA CTACCCAATC   180

TTTGGTAAAA AAGTAGGGGA AGCTGTAACT AGCGGTCAAG CTGATCTTGG AGTATGTATC   240

TGTGGTACTG GTGTTGGTAT CAACAACGCT GTAAATAAAG TTCCAGGTGT TCGTTCTGCC   300

TTGGTTCGTG ATATGACAAC AGCCCTTTAT GCTAAAGAAC AATTGAACGC TAACGTTATT   360

GGTTTTGGTG GTAAAATTAC TGGTGAATTG CTTATGTGTG ATATCATCGA AGCTTTCATC   420

1289

CATGCTGAAT ACAAACCAAC TGAAGAAAAC AAAAAATTGA TTGCGAAAAT TGAACATGTT   480

GAAAGTCACA ATGCTCAACA AACAGACGCA AACTTCTTTA CAGAATTCCT TGAGAAATGG   540

GATCGTGGAG AATACCACGA CTAAGAGGTG ACCTATGATT TTAACAGTCA CAATGAACCC   600

ATCCATCGAT ATTTCCTATC CCTTGGATGA GTTGAAGATT GATACTGTCA ATCGTGTGGT   660

GGATGTAACC AAAACGGCTG GTGGTAAGGG ACTCAATGTT ACCCGAGTAC TTTCAGAATT   720

TGGCGATTCT GTTCTTGCTA CTGGTTTAGT GGGTGGCAAA CTTGGTGAGT TTTTGGTTGA   780

ACATATCGAT AATCAAGTAA AGAAAGATTT CTTCTCAATT AAGGGAGAAA CTCGTAACTG   840

TATCGCTATT CTCCACGGAG ACAACCAA   868

(2) INFORMATION FOR SEQ ID NO: 263:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 3744 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 263:

CCGTTCAAAG TCTTCATAAG ACTCGAAAGT CACAGTTCTT TCGTTCTTGC TGGCATCTAT   60

ATAGGTAATT TCAATCATGT TTAAAACTCC TTTGTTTAAT GCTAACTTTA TTTTACTCCT   120

TATAAAAGAG AATGTCAAGA AAAATGATTG CGCACGCAAC TTTTTTTAAA ATCATCTTAA   180

ATCAAGAAAT CCAAACCTGC TTCCAAGCTT TCTTCGACAG TCTTTTGTAG CGAGGCCAGT   240

GTCTTTTGCC CATCATTTGT CAGGCAGATA AAACTAGAGC GTCTATCTTG ATGGCAACAC   300

ATGCGACTGA GTAGACCGCA ATTTTTAGCT TCCAAGCGAG CCACCATCCT AGAAACTGCG   360

CTCGGGCTCA GATGAAGCTT ATCTGGCAGG TCAATCTGGC GTAGAGATTT TTCTTCAGCC   420

AAGTCCAGAT AGTAGAGCAG GTAGAACTCT TTCAAGGTCA GACTTTGCTC GCTCTGTTGG   480

GCAATGGTCT CTTCCAAGAG ACTTTCAATT TCTTTCTGAC GCCGATTGAA GTCAAACCAT   540

TTTTCCAAAT AGGTCATAGT GTCTCCTTTC TTTTTAGAGT CATAAATAGA AGAAAGTCCA   600

TTAACGGGCA GTCTCTGCGT CACAAGATGA TTGCGCATGC AATAATTATA CTACTTTTCA   660

AGAATGCTGG CAAGCTCTGT TTTTTAGTGG TTTTATTTTT GTGTGAATAA TGGGGGAATC   720

CTATTGTTTC AATTTCTAAC TCCTTATCAC ATTCGAATTC AGATTTTATT TCATTTCTCT   780

ATCTATAGTT GCTTAGTTTA AAATAAGCAT GGTCTAATAA AGCTATGCAT ATAGTACTGA   840

TTTTAAACAA GGAGCATTAG ATTCCATTAA AGGAGGGCAC AGACATGTCG AGGCGGCCAA   900

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                              1290
AGTTTTTGAT GTCGGCGTCA GAACTCTCTT CACGTGGGAA AAGAAAGACG TAAACAAGGG     960

AACTTAGAGC GGAAAAAGCG AGTCGTCAAA AAGCGTAAGA TCCCTTTAGA AGAATTGAAA    1020

GCCTTTGTAG AGGCTCATCC AGACGCTTTT TTACGGGAAA TTGCGGCCCG TTTTGATTGT    1080

GCTTTGCCCT CCGTATGGGC AGTTTTAAAG CAGATTAAGG TCATTTTAAA AAAGACGACC    1140

AGTTTTAGGG AACAAAAGCC TGAGAAAGTT TCTGAGTTTC TTGATATTTT GGATAACCTA    1200

AAAGATTTAC CAGTCCTATA TATTGACGAA ACGGGAATCG ACCGCTACCT CTATCGTCCT    1260

TATGCAGGGG CTCCTAGAGG GGAGAAAGTC TATGGCAAGA TTAGCGGACG GCGTTTTGAG    1320

CGGACTAATG AGGTGGAGCA AAAACTCAAT GGTAGTTTTC TAATCAGATA TATTGATTCA    1380

CAAATTAGAG AATGAAAGAA TAATTATGCA TAAAAATAGG AATATAAACC AAAAATTAGC    1440

TGATTTATAC TCATTTGCGT GTCTTTATAA AAAACTTATC TTATAATATA TATATATATA    1500

TATACAAAAT AGTAAAATGC TTTTTTTTTT TAGCAAAAAT ACCTCAAGTT TCTTGCTATT    1560

TTGGGTTCCC TATTCTATAA TTATAGTATG GTAATTTATT TATATCCATA CATGAAAATA    1620

ATACTCGAAA GGAAATTTCA AAATATTTTT TAGACGTCAG AAGGGTGAAT ATAGAGAAAC    1680

AGACCGAGTA ACTCGGTTCA AATTAATCAA ATCAGGGAAG CATTGGCTAC GGGCCTCGAC    1740

TTCTCTTTTT GGCTTGTTTA AGGTCTTGCG AGGTGGTGTT GATACTACTC AGGTCATGAC    1800

CGAAACGGTA GAAGATAAAG TAAGTCATTC AATTACTGGG CTTGATATCC TCAGGGGGAT    1860

AGTTGCTGCG GGAGCTGTCA TAAGTGGAAC CGTTGCAACT CAAACGAAGG TATTTACAAA    1920

TGAGTCAGCA GTACTTGAAA AAACTGTAGA GAAAACGGAT GCTTTGGCAA CAAATGATAC    1980

AGTAGTTCTA GGTACGATAT CTACAAGTAA TTCAGCGAGT TCAACTAGTT TGTCAGCTTC    2040

AGAGTCGGCA AGTACATCTG CATCTGAGTC AGCCTCAACC AGCGCTTCGA CCTCAGCAAG    2100

TACAAGTGCA TCAGAATCAG CAAGTACATC GGCTTCGACA AGTATTTCTG CATCATCTAC    2160

TGTGGTAGGT TCACAAACAG CTGCCGCTAC AGAAGCAACT GCTAAGAAGG TCGAAGAAGA    2220

TCGTAAGAAA CCAGCTAGTG ATTATGTAGC ATCAGTTACA AATGTCAATC TCCAATCTTA    2280

TGCTAAGCGA CGCAAGCGTT CAGTGGATTC CATCGAGCAA TTGCTGGCTT CTATAAAAAA    2340

TGCTGCTGTT TTTTCTGGCA ATACGATTGT AAATGGCGCC CCTGCAATTA ATGCAAGTCT    2400

AAACATTGCT AAAAGTGAGA CAAAAGTTTA TACAGGTGAA GGTGTAGATT CGGTATATCG    2460

TGTTCCAATT TACTATAAAT TGAAAGTGAC AAATGATGGT TCAAAATTGA CCTTTACCTA    2520

TACGGTTACG TATGTGAATC CTAAAACAAA TGATCTTGGT AATATATCAA GTATGCGTCC    2580

TGGATATTCT ATCTATAATT CAGGTACTTC AACACAAACA ATGTTAACCC TTGGCAGTGA    2640

TCTTGGTAAA CCTTCAGGTG TAAAGAACTA CATTACTGAC AAAAATGGTA GACAGGTTCT    2700
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1291

ATCCTATAAT ACATCTACAA TGACGACGCA GGGTAGTGGG TATACTTGGG GAAATGGTGC   2760

CCAAATGAAT GGTTTCTTTG CTAAGAAAGG ATATGGATTA ACATCATCTT GGACTGTACC   2820

AATTACTGGA ACGGATACAT CCTTTACATT TACCCCTTAC GCTGCTAGAA CAGATAGAAT   2880

TGGAATTAAC TACTTCAATG GTGGAGGAAA GGTAGTTGAA TCTAGCACGA CCAGTCAGTC   2940

ACTTTCACAG TCTAAGTCAC TCTCAGTAAG TGCTAGTCAA AGCGCCTCAG CTTCAGCATC   3000

AACAAGTGCG TCGGCTTCAG CATCAACCAG TGCCTCGGCT TCAGCGTCAA CCAGTGCGTC   3060

AGCTTCAGCA AGTACCAGTG CTTCAGTCTC AGCATCAACA AGTGCTTCAG CCTCAGCATC   3120

GACAAGTGCC TCGGCTTCAG CAAGCACATC AGCATCTGAA TCAGCGTCAA CCAGTGCTTC   3180

GGCTTCAGCA AGTACCAGTG CTTCAGCTTC AGCATCAACC AGCGCCTCGG CCTCAGCAAG   3240

CACCTCAGCT TCTGAATCGG CCTCAACCAG CGCCTCGGCC TCAGCAAGCA CCTCAGCTTC .   3300

TGAATCGGCC TCAACCAGCG CCTCAGCCTC AGCATCAACG AGTGCTTCGG CTTCAGCAAG   3360

CACAAGCGCC TCGGGTTCAG CATCAACGAG TACGTCAGCT TCAGCGTCAA CCAGTGCTTC   3420

AGCCTCAGCA TCAACAAGTG CGTCAGCTCA GCAAGTATCT CAGCGTCTGA ATCGGCATCA   3480

ACGAGTGCGT CTGAGTCAGC ATCAACGAGT ACGTCAGCCT CAGCAAGCAC CTCAGCTTCT   3540

GAATCGGCCT CAACCAGTGC GTCACCTCAG CATCGACAAG CGCCTCAGCT TCAGCAAGTA   3600

CCAGTGCTTC AGCCTCAGCG TCGACAAGTG CGTCGGCCTC AACCAGTGCA TCTGAATCGG   3660

CATCAACCAG TGCGTCAGCC TCAGCAAGTA CTAGTGCATC GGCTTCAGCA TCAACCAGTG   3720

CCTCGGCTTC AGCGTCAAAC AGTG   3744

(2) INFORMATION FOR SEQ ID NO: 264:

        (i) SEQUENCE CHARACTERISTICS:
             (A) LENGTH: 795 base pairs
             (B) TYPE: nucleic acid
             (C) STRANDEDNESS: double
             (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 264:

CGATAAAGAG GCCTTGAGTA ATCTCAATTT GCAGATTGAA AATGGAGAGA TTATGGGCTT   60

GATTGGTCAT AATGGGGCTG GAAAATCGAC CACTATAAAA TCCCTAGTCA GTATCATTTC   120

ACCCAGCAGT GGTCGTATTT TGGTAGACGG TCAGGAGTTA TCGGAAAATC GCTTGGCTAT   180

TAAACGAAAG ATTGGCTACG TAGCAGACTC GCCTGACTTA TTTTTACGCT TAACGGCCAA   240

TGAATTTTGG GAATTGATCG CCTCATCCTA TGATCTGAGT AGATCTGACT TGGAGGCTAG   300

1292

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TCTAGCTAGG CTATTGAACG TTTTTGATTT TGCTGAAAAT CGCTATCAGG TTATTGAAAC        360

TCTTTCTCAC GGAATGCGTC AGAAAGTCTT TGTCATCGGA GCACTCTTGT CTGATCCCGA        420

TATTTGGGTC TTGGATGAAC CCTTGACTGG TTTGGATCCC CAGGCTGCCT TTGATTTGAA        480

ACAGATGATG AAGGAACATG CACAAAAAGG GAAGACAGTC TTGTTTTCAA CTCATGTCCT        540

AGAGGTGGCA GAGCAAGTCT GTGATCGGAT TGCCATTTTG AAAAAGGGGC ATTTGATTTA        600

TTGTGGTAGT GTAGAGGACT TGAGAAAAGA TTACCCAGAC CAGTCTTTGG AAAGTATCTA        660

CCTTAGTCTT GCTGGTAGAA AAGAGGAGGT TGCGGATGCG TCTCAAGGTC ATTAAAAAAT        720

TAGTTGATAT CAATATCCTT TATTCATCTC AAGAAGCTAA TCTGGCTAAT CTACGAAAGA        780

AGCAGGCTAA GAATC                                                        795
```

(2) INFORMATION FOR SEQ ID NO: 265:

       (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 2231 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 265:

```
TGGTAATGTG CTTGGCAGCw TCCTTGACAC TGCTACTACC ATTTCCCATA GCGACCGACA         60

TACCAACGCC AGCCAGCATT TCAAGATCAT TATCTGAGTC ACCAAAAGCC ATGACTTGGT        120

TGAGGTCAAA GCCATATTCT TTCCCAACTC GGCGAATGCC TTCTAATTTA GAATTTCCCT        180

GATTGATGAC ATCCGATGCA AAAGGATTGC TACGTGTCAA TTTCAAGTCT TCAAAATCAG        240

CTGCCGCCTT CTCAGATTCT TCTGGTGTCA TCAGCATCAA AACTTGGTAG ATAGGCTGAT        300

TCATCAGGTG AAGCAGGTCC TCTTCCTTTT GGGGAACAAC CTTGCTGACC ATGCGATTAA        360

AAGACTGACT CACCGTCCGA GTTAAAACAG AGGGAACGAA GCGACTAATT CGTTGGGAAA        420

AAGAACCCAG ACCAAAGGAC ATGATTTTAG AACCCAACAT GGCATCCTTG GTCCCTAGAG        480

CAATCTCCGT GCCCTCTTTT TTAGCATAGC TAATTAGATG GCGCAAATGT AACTTGGAAA        540

TAGGGCTCGT GAACAAGACT CTGTCTTTAC TAAAGATATA CTGGCCATTA TAGGTTACCG        600

CAAAATCCAG ATCCAAATCG TCCATCAATT CCTTAACAAA AAAAGGTCCT CGCCCTGTCG        660

CTACGCCAAC TAGTACCCCT TGTTCTTTGA CAATCTTAAT CGCATCCTTA GTGGATTTCA        720

AAACACTCTT GCGATTGTTG ACCAAGGTTC CATCGATATC AAAAAAAACA GCTTTGACTT        780

CCATCCTATC CCAATCTCCC CTTTTGTGAT ACAATGATTA TACCACATTT CAGAAAGAGT        840

GAGTAAATCA TGCCTAAGAA AATCCTTGTT TTACATACGG GTGGAACTAT TTCCATGCAG        900
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1293

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GCCGATGCTT CTGGCGCTGT TGTGACGAGT TCAGATAATC CCATGAACCA TGTGTCCAAC        960

CCACTTGAAG GAATCCAAGT CCACGCCTTG GACTTTTTTA ACCTTCCAAG TCCCCATATC       1020

AAACCCAAAC ATATGCTGGT CCTCTACCAG AAAATTAAAG AGGAAGCAGA TAACTACGAT       1080

GGAGTGGTGA TCACACACGG AACCGATACT TTAGAGGAAA CAGCCTATTT CCTTGATACC       1140

ATGGAAGTTC CCCATATGCC TATCGTTCTA ACAGGAGCCA TGCGTACtCC AATGAGCTCG       1200

GTAGTGATGG TGTTTATAAT TACCTAAGTG CTTTACGAGT GGCCAGCGAT GACAGGGCTG       1260

CTGACAAAGG AGTTTTGGTC GTTATGAACG ATGAAATCCA CGCTGCCAAG TATGTCACCA       1320

AAACACATAC GACTAATGTC AGCACCTTCC AGACTCCAAC ACATGGCCCC CTTGGTCTCA       1380

TCATGAAACA GGAAATCCTC TACTTCAAAA CAGCTGAACC TCGTGTTCGC TTTGACCTTG       1440

ATCACATACA AGGTTTAGTC CCTATCATCT CGGCTTATGC TGGTATGACA GATGAGCTGA       1500

TTGATATGCT GGATTTAGAA CACTTGGACG GTTTGATTAT CCAAGCCTTC GGAGCTGGTA       1560

ATATTCCCAA AGAAACGGCT CAAAAATTAG AAAGCCTTCT GCAAAAAGGA ATTCCAGTCG       1620

CTCTGGTATC ACGATGCTTT AACGGTATTG CCGAGCCTGT TTATGCATAC CAGGGTGGGG       1680

GCGTACAGTT GCAAAAAGCA GGCGTTTTCT TTGTTAAAGA ACTCAACGCC CAAAAAGCTC       1740

GCTTGAAACT CCTCATCGCC CTCAATGCCG GACTAACAGG ACAGGCTTTG AAAGACTATA       1800

TGGAAGGCTA ATACTCTTCG AAAATCTCTG CAAACCACGT CACGTCGCCT TACCCTATGT       1860

ATGGtACTGA CTTCGTCAGT TTCATCTACA ACCTCAAAAA CATGTTTTGA GCTGACTTCG       1920

TCAGTTCTAT CTACAACCTC AAAAACATGT TTTGAGCTGA CTTCGTCAGT TCTATCTACA       1980

ACCTCAAAAA CATGTTTTGA GCTGACTTCG TCAGTTCTAT CTACAACCTC AAAAACATGT       2040

TTTGAGCTGA CTTCGTCAGT TCTATCTACA ACCTCAAAAA CATGTTTTGA GCTGACTTCG       2100

TCAGTTCTAT CTACAACCTC AAAAACATGT TTTGAGCTGA CTTCGTCAGk TCTATCTACA       2160

ACCTCAAAAA CATGTTTTGA GCTGACTTCG TTAGTTTCAT CTACAACCTC AAAAACATGT       2220

TTTGAGCTGA C                                                          2231
```

(2) INFORMATION FOR SEQ ID NO: 266:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 1310 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 266:

1294

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GAGTCAAAGG CTCCGAGGTT GACTTTTTAC AAGGGGACAG GTGAATATTA TCTAGACCTG          60

TCAGAAATTC TCTTCTTTGA AACAGAAGGG AGCAAGATCT ACGCTCATAA CCAGAAGGAA         120

GCTTATGAGG TTCGCCTCAA GCTCTATGAG TTGGAGTCTA TCTTGCCTCG CTATTTTAAT        180

CGAGTTTCCA AGTCAACGAT CGCAAACATC CGTCAGATTT ACTCAGTGGA CAAGTCCTTT         240

TCAGGAACGG GCACCATTTC CTTTTATCAG ACGCACAAGG AGGTTCATGT CTCACGGCAT         300

TACCAATCCC TCCTAAAAGA AAATCTAAGA AACATGAGGT AAAAAACATG AAAAAGAAAG         360

CATTTGGTAT TGTTTTATTG GTTTTAGCAG CTTGGATCTT GCTGCAAGGG AATTTTGGAA         420

TTCCTTCTTT GGATGGTAAA ATATGGCCTT TACTAGGTAT TGTTTTTTTT GCTTATAAGT         480

CCATTGAGTC CATCCTTAGA CGTCATCTCA CTTCGGCAGT TTTTACAGGT TTACTGGCGC         540

TCATCATTGC AAATTACGCT TATGACTTGT TACCAGTTAC CAATCATTCT CTTATTTGGG         600

CTAGCATCTT GGTGGTACTT GGTGTTGGTT ATCTGACGCA TTCAAGTAAG TTCTGGAATG         660

AAAAAAAATG GTGGTACAAT GGGAAAAAAA CAGTCGTCAC GGATAAGGAA GTCGCTTTTG         720

GTAGCGGGAC CTTCTATAAG CAAGATCAAG ATCTCGTAGA TGACCAAGTG GAAGTCGCTT         780

TTGGGGATGC TAAAAATCTAC TATGATAATG CAGAGATGCT AGGTGATTTT GCAACTTTAA        840

ATATTGAAGT GGCCTTCGGG AATGCAACCG TCTATGTTCC ACAACACTGG CGTGTAGATT         900

TGAAAGTAGA AACCTCCTTT GGTGCAGCTA AGGCTGACGC TCCTGTAGCC CCAACCAGCA         960

AAACCTTGAT TATCCGTGGA GATGTGGCTT TTGGGAAGTT GGAAATTGTC TACGTTAAAT       1020

AAAAAAATCT TCACTTCAAC CATCAAAATA GACGTACTAA GAGTAGGAAA TTGATGCCTT       1080

GCTCTGATTT CAGTTCTATG GTTGTTAGAC TTTAAAAAAT GAAATGCTGC CTTTAAAAGT      1140

TGTATATTTT TCGATATTTT GGCTTTTACG TTTGATGTAT CTATGTACTA CAGCGTAGAT      1200

GATGTAGTGT CAAATGCTTT TAAAAAACGG ATGATATTGG ACAGTTTTTT TGCCTTTAAT      1260

TGCTCAGGAA CCATGAAAGT CAGTACCTGG GTTTATGACA AGGGAGAATG                 1310
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(2) INFORMATION FOR SEQ ID NO: 267:

        (i) SEQUENCE CHARACTERISTICS:
             (A) LENGTH: 5922 base pairs
             (B) TYPE: nucleic acid
             (C) STRANDEDNESS: double
             (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 267:

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ACTCTGATTT GATTGGAACG ACAGTCGGTG CCATTGCAGT TACTTCAAAC GTAACGACTT          60

ATGTTGAGTC TGCTGCTGGT ATCGGTGCAG GTGGACGTAC TGGTTTGACA GCCTTGGTTG         120
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1295

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TAGCTATCTG TTTTGCGATT TCAAGCTTCT TTAGCCCACT TCTAGCGATC GTACCAACAG        180

CGGCTACAGC TCCAATCTTG ATTATCGTTG GGATTATGAT GCTTGGTAGC TTGAAAAATA        240

TCCATTGGGA TGATATGTCT GAAGCAGTTC CTGCCTTCTT CACATCTATC TTTATGGGAT        300

TCAGCTACTC TATCACTCAA GGGATTGCAG TTGGTTTCTT GACTTACACT TTGACTAAGC        360

TTGTTAAAGG TCAAGTTAAA GATGTTCATG TCATGATTTG GATTTTGGAT GCCTTGTTTA        420

TCCTTAACTA CATCAGCATG GCCTTATAAT AGAATGACCC AGGGGGATTT CCCCCCTTTT        480

TTAATACAaG GAGATAGGTG ATGAAAGAGA AAAATATGTG GAAAGAATTG TTGAATCGTG        540

CAGGCTGGAT TTTGGTCTTT TTACTTGCCG TCCTTTTATA TCAGGTTCCC CTAGTGGTTA        600

CCTCTATTTT GACTTTAAAA GAAGTAGCCC TGCTACAGTC AGGGCTGATA GTTGCTGGCC        660

TTTCAATTGT GGTTCTGGCT CTATTTATTA TGGGAGCTCG TAAAACCAAG TTAGCTAGTT        720

TTAATTTTTC TTTTTTTAGA GCTAAAGATT TGGCACGTTG GGGCTTGAGT TATCTAGTTA        780

TTGTCGGGTC AAATATACTT GGTTCCATTT TATTGCAACT GTCAAATGAG ACGACAACAG        840

CTAACCAGTC TCAGATTAAT GATATGGTTC AAAATAGTTC GTTGATTTCC AGTTCTTCT          900

TGCTAGCCTT GCTTGCTCCG ATTTGTGAGG AAATCTTGTG TCGTGGGATT GTTCCTAAAA        960

AGATTTTCCG AGGCAAGGAG AACTTGGGAT TTGTAGTCGG TACGATTGTG TTTGCTTTAT       1020

TGCATCAACC AAGTAATTTA CCTTCTTTAT TGATTTATGG AGGTATGTCG ACACTTCTAT       1080

CTTGGACAGC CTACAAGACC CAACGTTTGG AAATGTCGAT CTTGCTTCAC ATGATTGTTA       1140

ATGGGATTGC TTTCTGTTTG TTGGCTCTTG TGGTGATTAT GAGTCGGACA TTAGGAATTT       1200

CTGTTTAAAA GTTTTTATGT AGGAACCGAC CTCTTTCTAC CAGGGAAAGA TGAATGCAAT       1260

CGTGTCCATC TTTTTCTTTT TATGGTAAAA TAGAAAAATA ATATGATGAA AATCCTTGAG       1320

GGAGTGACCG ATATGTCAAG TAAAGCCAAT CATGCAAAGA CAGTTATTTG CGGAATTATC       1380

AATGTAACCC CAGACTCCTT TTCGGACGGT GGTCAATTTT TTGCTCTTGA GCAGGCGCTC       1440

CAGCAGGCTC GTAAATTGAT AGCAGAAGGA GCCAGTATGC TAGATATCGG CGGAGAATCG       1500

ACTCGGCCGG GAAGTAGCTA TGTTGAGATA GAAGAGGAAA TCCAGCGTGT TGTTCCAGTG       1560

ATCAAAGCGA TTCGCAAGGA AAGTGATGTC CTCATCTCTA TTGATACTTG GAAGAGTCAA       1620

GTAGCAGAGG CTGCTTTGGC TGCTGGTGCC GATCTAGTCA ATGATATCAC TGGTCTTATG       1680

GGTGATGAGA AAATGGCTTA TGTGGTAGCT GAAGCGAGAg CGAAAGTGGT CATCATGTTT       1740

AACCCAGTTA TGGCTCGACC TCAGCATCCT AGTTCGCTTA TCTTCCCTCA TTTTGGTTTT       1800

GGTCAAACCT TTACAGAAAA AGAGTTAGCT GACTTTGAAA CATTGCCAAT CGAAGACTTG       1860
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                                      1296
ATGGTGGCTT TCTTTGAACG AGCACTAGCG AGAGCGGCAG AAGCTGGTAT TGCACCAGAA      1920

AATATCCTGT TGGATCCAGG AATTGGCTTT GGTCTGACCA AGAAAGAAAA TCTGCTTCTT      1980

TTACGGGACC TGGATAAACT ACATCAGAAG GGCTATCCAA TCTTTCTCGG AGTGTCGCGC      2040

AAGCgATTTG TCATCAATAT CCTAGAGGAG AATGGTTTTG AAGTCAATCC TGAGACAGAG      2100

CTTGGTTTCC GAAATCGGGA CACGGCTTCG GCTCATGTAA CTAGTATCGC TGCCGAGACAG      2160

GGTGTAGAAG TGGTGCGCGT GCATGACGTA GCTAGTCACA GGATGGCAGT TGAAATTGCC      2220

TCTGCCATTC GTCTGGCTGA TGAAGCGGAA AATTTAGATT TAAAACAATA TAAATAAGAT      2280

GAAAGAAATT GAAAACAATC AGTGGATTGC TAACTACCGG ACGGATCAAC CGCATTTTGG      2340

CTTGGAACGA ATGGTGGAAC TGTTAGCTTT GCGTGGCAAT CCCCATCTCA AACTCAAGGT      2400

CCTCCATATC GGAGGGACTA ACGGCAAGGG CTCGACTATT GCTTTTTTGA AAAAGATGCT      2460

AGAAAAGCTA GGGTTGAGAG TTGGCGTGTT TAGCTCGCCC TATCTCATTC ATTACACAGA      2520

CCAGATTAGC ATCAATGGGG AATCGATCTC AGAAGCGAGG CTAGAAGCTC TCATGGCAGA      2580

CTATCAGTCT TTGCTGGAGG GAGAAGCGGT CGCCAATTTA CAGGGCACAA CCGAGTTTGA      2640

GATTATCACA GCCCTGGCCT ATGACTACTT TGCCTCAGAG CAAGTAGATG TGGCCATCAT      2700

GGAAGTTGGC ATGGGTGGAC TTTTGGATAG TACCAATGTC TGTCAGCCCA TTTTGACAGG      2760

AATTACAACT ATTGGCTTGG ATCATGTGGC TCTACTTGGT GACACCTTGG AGGTCATAGC      2820

AGAGCAGAAG GCAGGTATTA TCAAACAAGG GATGCCCTTG GTAACAGGGC GTATTGCTCC      2880

AGAAGCCTTG GCTGTGATTG ACCGCATTGC GGAAGGGAAA GATGCGCCGA GACTTGCCTA      2940

CGGGACAGAT TATCAGGTTC GTCATCAAGA AAGTGTGGTG ACAGGGGAAG TCTTTGACTA      3000

TACAAGTGCT GTCAGACAAG GTCGCTTCCA GACTAGCCTG CTTGGTTTGT ACCAAATAGA      3060

GAATGCTGGG ATGGCCATAG CTTTACTTGA TACTTTTTGT CAAGAAGATG GTCGAGAGCT      3120

AGCAAGCAAT GATTTTCTTG GTCAAGCCTT GGAAGAAACA AGTTGGCCAG GGCGTTTGGA      3180

AATCGTGTCA AGAGATCCCT TGATGATTTT GGATGGAGCC CACAATCCCC ATGCTATCAA      3240

GGCCTTGTTG GTAACCTTGC AAGAACGTTT TGCGGATTAT CATAAGGAAA TCCTCTTCAC      3300

TTGTATCAAA ACCAAGGCCT TGGAGGATAT GTTGGACTTG CTGGGAGCCA TGCCAGTTAC      3360

CGAGCTTACT CTAACACATT TTGCGGATAG TCGGGCGACG GATGAAAACG TGCTGAAAGA      3420

GGCAGCTAAG TCTAGAAATC TCAGCTACCA AGATTGGCAT GATTTTCTAG AGCAGAATTT      3480

GACAGATAAA AAAGAAGAGA AACAAACAGT TAGGATTGTC ACAGGTTCCT TGTATTTCTT      3540

GAGCCAAGTG AGGGCCTATC TGATGGAGAG GAAGAACGAG AATGGATACA CAAAAGATTG      3600

AAGCGGCTGT AAAAATGATT ATCGAGGCTG TAGGAGAGGA CGCTAATCGC GAGGGCTTGC      3660
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1297

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AGGAAACACC TGCTCGTGTA GCCCGTATGT ATCAAGAGAT TTTTTCAGGT CTTGGTCAAA    3720

CAGCAGAGGA ACATTTGTCA AAATCCTTTG AAATTATTGA CGATAATATG GTGGTAGAAA    3780

AGGATATCTT TTTCCATACC ATGTGTGAAC ACCACTTCTT GCCATTTTAT GGTAGAGCGC    3840

ACATTGCCTA CATTCCAGAT GGTCGTGTGG CAGGCTTGTC TAAGCTAGCC CGTACGGTTG    3900

AAGTTTATTC GAAAAAACCA CAAATTCAAG AACGTTTGAA TATCGAAGTG GCCGATGCCT    3960

TGATGGACTA TCTAGGTGCT AAAGGAGCCT TTGTTGTCAT TGAGGCGGAA CATATGTGTA    4020

TGAGTATGCG TGGTGTTAGA AAACCAGGCA CTGCAACCTT GACGCAGTA GCTCGTGGTC     4080

TATTTGAAAC AGATAAGGAT CTCCGTGACC AAGCTTATCG TTTAATGGGG CTATAAAAAG    4140

AATCCGCTTC AAGCGGATTT TTCTAGAAAG GAATCATTAT GGATCAACTG CAGATTAAGG    4200

ATTTGGAAAT GTTTGCCTAT CATGGTCTTT TTCCTAGTGA GAAAGAATTG GGGCAGAAAT    4260

TTGTCGTTTC AGCCATCCTA TCCTATGATA TGACCAAGGC AGCTACAGAC TTGGATTTAA    4320

CAGCCTCTGT CCATTACGGA GAATTGTGTC AGCAGTGGAC GACTTGGTTT CAGGAAACGA    4380

GTGAAGATTT GATTGAAACG GTAGCCTATA AACTGGTGGA ACGTACCTTT GAGTTTTATC    4440

CTCTTGTCCA AGAAATGAAG TTGGAACTGA AAAAACCTTG GGCACCGGTG CATTTGTCAC    4500

TAGATACTTG CTCGGTAACC ATTCATCGCC GCAAGCAACG AGCCTTTATC GCCCTAGGAA    4560

GCAATATGGG AGATAAACAA GCAAACTTGA AGCAAGCCAT TGACAAACTC CCAGCTCGTG    4620

GCATCCATAT TCTCAAAGAG TCCAGTGTCT TAGCGACGGA GCCTTGGGGT GGAGTGGAGC    4680

AGGATAGCTT TGCCAATCAA GTGGTTGAGG TGGAAACCTG GCTACCAGCA CAAGACTTGT    4740

TAGAAACCTT GTTAGCCATT GAGTCAGAGC TGGGACGGGT GAGAGAAGTG CATTGGGGAC    4800

CTCGTTTGAT TGATTTGGAC TTGCTCTTTG TGGAGGACCA GATCCTTTAT ACAGACGACC    4860

TCATATTGCC TCATCCTTAC ATAGCGGAAC GCCTTTTTGT CCTTGAGTCt TACAGGAAAT    4920

TGCGCCTCAT TTTATCCATC CGATATTAAA ACAACCGATC CGCAACTTGT ATGATGCTTT    4980

GAAAAAATAG AAAAACTCTA GTTTTCAGTT ACTTGCAACT GAAGGCTAGA GTTTTTATAC    5040

TCTTCGAAAA TCTCTTCAAA CCACGTCAGC GTCGCCTTAC CGTACTCAAG TACAGCTTGC    5100

GGCTAGCTTC CTAGTTTGCT CTTTGATTTT CATTGAGTAT TAAAATAGGT CATTTTCTTC    5160

TGGGAGGAGG ATAGTTTCTC TACCGTCCAT GTCTAAAACC AGTACTCTTG GGGGATAACG    5220

AGGGTCGAAA GGATGGTTAA AGTCAAAATC AATGGCTGTA GGGAGGTGTT GACTTGAAAA    5280

GTGGAAGGTA ATCTTTCCTT GGTTATTAAG CAATTGAAAC TCGAGTTCTT CTTCCAATTC    5340

AAAGACATTT TTTAAGAAAT GGTCGATGAT ATACCAAAAA GAGTCAATGA TGTCATCAGG    5400
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                                1298
CAAGCTGGTA ACAATACCAA AACTAGCAGA TCGCATGTGG GTATTGGTAA AAGCCATATC      5460

TCTGTCCCCT TTCTTTTCCC TTATCATACA GCAAATAGGA TTAAAAATCA AGAAAAGGTG      5520

ATTTTTTGAA AAGGATTTTA GTTACAGGGA GAAATAGGGA AAAAATTCCT AAAAATCTAC      5580

CGAAGTTAAT AGGTAAAATTC CCAAATTAAC TTGATTATAT AACTTTCAGT TACTTTGAGA     5640

AGTTACCGAA AAATATTTTT CATATCTATT GACTTTTAGG GGTAAAATTT GGTATGATAG      5700

TAGGCGGTAT TGTTTACCCC ATTTGAAAGG CCCCGGAACC TTCCAAATAC TTTTCGATGG      5760

GAAGGAACAC CCATCACCGT AAACAAAAAT CGAACTATAT ATAGGAGAAA TCATGAACAA      5820

AACAACATTT ATGGCTAAAC CAGGCCAAGT TGAACGTAAA TGGTACGTAG TTGACGCAAC      5880

TGATGTACCA CTTGGACGTC TTTCTGCAGT AGTTGCTAGC GT                        5922
```

(2) INFORMATION FOR SEQ ID NO: 268:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 1988 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 268:

```
TAACTATCTA CGATGAGCTG TTGTGATTCT CATTAGTTCC CCTTTCCCAA GAGGCATAGG       60

GGTGCGCATA ATAGATGTGC TCCTCAGAAA ATATATCAAA CAAGCGATTG AATTCCGTTC      120

CATTATCTGC CGTGATGGAA AGAATCTTGT GTTGTTTTAA GATGAGTTTT AGAGCCTGAT      180

TGACCACCTC AGCACTTTTA TTTGGAATCA ATCGGATGAT CTGATGTCTA CTCTTTCGAT      240

CCGTCAAGAC AATCAAGCAG TAGTTTTTCG ATCTCGTAAG TAGAACCGTA TCAATCTCAT      300

AATGCCCATT CTCCAAGCGA AGATTGATAG CTTCAGGCCG CTGTTCGATG GATTGACCAG      360

CAGGTTTAAA GTTGGTGCTA GCCTGTTTCT TAAGCGCTTT TCCTTTTCTA GGGTAAAGCA      420

AATCCTGCTT GCTTAACCCC AATTTTCCAT GATGAATCCA ATAGTAAATG GTTGAAATTC      480

CCACGTTAAC CCCTTTAGCC ATAACCATCA TTTCAGGCGA AAATTTTTGG TTATGATAGT      540

GGAGAATCTT TTCCTTTAGT TCCTTGGTCA AGCTTGATTT CTTGACCGAG CGCTTGCGAT      600

TGTTTTCATA AGACTGTTGA GCGTAGTCGG CAGAATAAAC CTCTTTGAAG CGCCCTTTTC      660

CAAGACATTG TCGGACTGTC CCACGCTTGA TTTCAGTGTG ATAGTTTGAG GAGCTTTTCC      720

AAGTAGAGAG GCAATTTCTC TATTTGATTT TCCTTCTTTT TTCCATCTTT CGATTAAGCG      780

ACGGCTATCG ATTGTCAAAT GTTTGGCTTT TGTAGTATAA TTGTCTTGCA TCTCTGTGCC      840

TTTCTTGTGT TTGTGGTTGA ACAACAAGTA TAACACAGAG GTGCTTTCTT ATGCCTACAA      900
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1299

GAGCTTTCAT TATTTCCATT TTCTTTTGGA TTTCACTCTA TTCTGAAAAA CTTGTGTATA   960

TTTACTGAAG CTAGCAAGTC TTACCTGTAA ATTTAATGAA AGCAACACAA AATCCGAGAG   1020

GGGAATCTCG GATTAATAGA TAGAGAGTTT TTAGTTTAAA TAAATTGTTT AAAATATCAA   1080

CAACATCACT TCTTTTCTTA ACCTGATAAG TCTTGATTCC TAATTTTGGG GCTACGATTA   1140

TATTGTCCTC AATATCGTCT AGAAAGACAC AATTTCTAGG TTATAACTGG TATTTATCGA   1200

TAGTTACTCA TATACATCAG TCCACCTCCA TACTTATGTG CGAGCCTCTC TTTGTATTAT   1260

ACCTCCATAC TCACCTTACA GATTCTTTTG GTAATAATAT CTTTGCCTAA TGTAGAGACA   1320

GTCTTGCAAA GAAAAAACTT CCTTGTAGCC ATGTTTCTGA TAAAAGTCCG GTGCCTGGAA   1380

CTGGTAAGTA TTGACAAAGG CAAAACAACA ATTTCGATTC TTAGCTTCAC TTTCTGCCTG   1440

TTGCAATAGT TTTGAACCGA TTCCTTGCCC TCGCAGTTCC TCTTTTACAA ACAAATACTC   1500

GATTTCTAGC CAATTTCCAA AAGTCTCTGC TATCAAACCT GCCAGGAGAT TGCCCTTTTC   1560

ATCTTCGACA TAAAGATTAA GTGGCTCACT TTCAGCCTCT TCTCTTTTTG AACGGTTATA   1620

AACACGAATC AGATTCCCTA TTTCTTGCGA TTTATGTGAT TCCTTATTTT CCAATCTAAA   1680

GTATAGTGAA ATGAAATAAA ACATGCGCAA ATCGATTAAG GAATTTAATC TAATTTCTAA   1740

CAATGTCTTA GAAATCAAAG TGTACTATTT TAACTTCAAT GCACTATACA TCTAATACTC   1800

AATAAAAATC AAAGAGCAAA CTAGGAAACT AGCCGCACCT TGCTCAAAAC ACTGTTTTGA   1860

GGTTGTAGAT AGAAcTGACG AAGTCAGCTC AAAACATAGT TTTGAGGTTG TAGATGAAAC   1920

TGACGAAGTC GGCTCAAAAC ATGGTTTTGA GGTTGTAGAT GAAACTGACG AAGTCAGCTC   1980

AAAACAGG   1988

(2) INFORMATION FOR SEQ ID NO: 269:

         (i) SEQUENCE CHARACTERISTICS:
             (A) LENGTH: 709 base pairs
             (B) TYPE: nucleic acid
             (C) STRANDEDNESS: double
             (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 269:

CCGGATATTT GTTTTATGTA ATTTTCTTGC AAGTTTCTTC TTAGTAGCTT GTCAGTCAGG   60

TTCTAATGGT TCTCAGTCTG CTGTGGATGC TATCAAACAA AAAGGGAAAT TAGTTGTGGC   120

AACCAGTCCT GACTATGCAC CCTTTGAATT TCAATCATTG GTTGATGGAA AGAACCAGGT   180

AGTCGGTGCA GACATCGACA TGGCTCAGGC TATCGCTGAT GAACTTGGGG TTAAGTTGGA   240

```
                                     1300
AATCTCAAGC ATGAGTTTTG ACAATGTTTT GACCAGTCTT CAAACTGGTA AGGCTGACCT       300

AGCAGTTGCA GGAATTAGTG CTACTGACGA GAGAAAAGAA GTCTTTGATT TTTCAATCCC       360

ATACTATGAA AACAAGATTA GTTTCTTGGT TCGTAAGGCT GATGTGGAAA AATACAAGGA       420

TTTAACTAGC CTAGAAAGTG CTAATATTGC AGCCCAAAAA GGGACTGTTC CAGAATCAAT       480

GGTCAAGGAA CAATTGCCAA AAGTTCAATT AACTTCCCTA ACTAATATGG GTGAAGCAGT       540

CAATGAATTG CAGGCTGGAA AAATAGATGC TGTTCATATG GATGAGCCTG TTGCACTTAG       600

TTATGCTGCT AAAAACGCTG GCTTAGCTGT CGCAACTGTC AGCTTGAAGA TGAAGGACGG       660

CGACGCCAAT GCCGyTGCTC TTAGAAaATA GTGATGATTT GAAAGAAGT                   709
```

(2) INFORMATION FOR SEQ ID NO: 270:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1680 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 270:

```
TATAAAATGT TAAGTTAAAT GATTTCAAAA TTCAGAAAGG GATTGCTTTA TGCAGTTCCT        60

TTTTATTTTA ACAGGAGTGA AACTATAGTG TTTCTAAATT GTGAATCAAT CAAAACTGAT       120

TGTGATGGGG CTATTCTAGC TTTAGAAACC TTCAAAAATT AAAATTTAAG GCAATCAATT       180

ACTTGGAAGA GTATGAAAGC ATTTAGTTTA TAGGAATTCT AGGTCTAGAA TTACATATAT       240

ATATTTATGA AGACGGGGTG TTCGATAGTT AGTATTGTTC TATTCTGAAA GATTTGAGCT       300

GTCAGTTGTA TAGAAAGTGT TCGAATTTTT TTAAGTGATT AAATTAGTTA ATTGTATGAG       360

GTGCTTTATG ATATAATGTT CTTAATGAAT TTTCAGAAAG GAAAACCTCA AATTGTTCTA       420

CAAATTTCTA CTCTTCGACC TCGACCACAC TCTTCTTGAT TTTGATGCTG CTGAGGATGT       480

GGCTTTGACC CAACTTCTAA AAGAAGAAGG AGTTGCGGAT ATTCAGGCTT ATAAAGATTA       540

TTACGTTCCT ATGAACAAGG CTCTCTGGAA AGACTTGGAG CTGAAGAAAA TCAGTAAACA       600

AGAGCTGGTT AACACGCGCT TTTCTCGTTT ATTTGCTCAT TTTGGACAGG AAAAAGACGG       660

TAGTTTTCTT GCCCAGCGTT ACCAATTTTA CCTCGCCCAG CAGGGACAAA CACTATCGGG       720

CGCTCATGAT CTCTTGGACA GCCTCATTGA GCGTGATTAT AACTTGTATG CTGCGACAAA       780

TGGCATTACT GCCATTCAGA CAGGACGTTT GGCTCAATCT GGTCTAGCAC CTTATTTCAA       840

TCAAGTCTTT ATCTCAGAAC AGTTGCAAAC TCAAAAGCCG GATGCTCTTT TTTATGAAAA       900

GATTGGCCAG CAAATTGCTG GATTTAGTAA AGAAAAGACG CTGATGATTG GAGATTCTCT       960
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1301

AACCGCCGAC ATTCAAGGTG GCAATAATGC GGGGATTGAC ACTATCTGGT ATAATCCTCA   1020

TCACCTCGAA AATCACACAC AAGCCCAGCC GACTTACGAA GTCTATTCTT ACCAAGACTT   1080

GCTGGATTGT TTAGATAAAA ATATTCTTGA AAAGATCACA TTTTAAAGGA GACGAGCTAA   1140

TGACTACAAA AAAGCTAATA TTACTATTGA AGAGTACATT GAAATGTCTG AAGTTGATTT   1200

TAATGAAGCT GTTAATTATG AATTTACATC TGACACTTGT CAATTAGCAA ATAGTATTTA   1260

TCAATCTCTT TTTAAGTTTT TTGATAAGAA AAATTTCTCT GGCGATTTAA TTTTTACTTG   1320

GAAATCTCCA TCATTAGTCA AAGAAGGGGA TTATATTGGG AGAAGGGATT CACAAGTAGA   1380

TAATCTTAGA GTAATAGGAA ATATATTTCC GAATTATCTT ACTAATCGAA AATATAGCCT   1440

CAATATGAAT CGTAATGGCT GTATGGGAGA TTTTCCTCAT GACTTTTTTG ATATATACCT   1500

AGATCATGTA GCAAAATATG CCTACGAACA AAAAGTTAAT AATATTAAAG AGTATTATCC   1560

TTTAAAAAGA GCGATTTTAC ACCAAGAGAA TGCATTGTAT TTTCGATTTT TTTCTAATTT   1620

TGACGACTTT TTAGAAAAAA ATTATTTAAA GACTATATGG CAAGTTTCTA AAGAAACTCC   1680

(2) INFORMATION FOR SEQ ID NO: 271:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 598 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 271:

AGCTCGGTAC GTAGTATnTG TGGTGCATAA ATGAGTGAAA AGAGGATAGA GAGGATGAGG   60

CCGATAAGAA CACCGGTAGC TGCATCGTGA AATACTTGTT TTTTCATAGT TCTAATTTCT   120

CCTTGATGGT TTTTAGATAA CGGCGTGAAG AGTAGGTGAA GCTTTCGTTT TTCAAGAAAA   180

TTTCTACCAG ACCGTTTGGC GTGAgCTTGA GGTGAGAGAT GGAATCGATA TTGATGATTT   240

CTGATTGGGA AATTTGGATA AAATTGGTTG GCAAGAGTTT AAGAACCTGA TAGAGTCGCA   300

AATCAATGCT GTAGGTCTGA CTCGCGGTTT CTGCTAGAAC CTTCCGATTC TCGATATAGA   360

AGCGCTGAAT CTTGCCAATC TCAACTAGAT AGACCTGATC ATCGATTTTT CCTTTGATTT   420

TTTCTCTTTG GTCCAGATTT TCTGCGAACT CGATGACTTT CTGGACTTTT TCGGTTTCTT   480

GAGGTGCTTG GACAATCAGC TTTTCCTCCT CGTAAGTCTC ACTAATCTGT AGTTCTACTT   540

TCATAGTTTT CTCTCCTTTT CAGTTATACA AGGTTGTGAT CACTTCCTGT ATATCCGG   598

(2) INFORMATION FOR SEQ ID NO: 272:

1302
(i) SEQUENCE CHARACTERISTICS:
    (A) LENGTH: 1099 base pairs
    (B) TYPE: nucleic acid
    (C) STRANDEDNESS: double
    (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 272:

```
CCAGCAAATC AATAACTGCA ATTGCTATAA AATGGATTCT ATAGAGTTTT TTCATGACAA        60

GACCTCCCTC TTTTATCTAA CTTCATTCTA CTCCAAAAGA ATGGGAGTTA CAACTAAAAT       120

GATAAAAATA GCAGAAGGGA GATTCTCTTA AGTTGGCTAG TATTCTTTAT TTGAGTTTCC       180

TTCTATTATC TAACTTCTTC ATCATTCCAG ACAAATAAAG CTCCGATTGC ATTGAGGATA       240

TAAAAGATGT ATTTACCGAT ATTGGCGAAG TTTCCTTGAA TACCAGCTTT TGTCAGCTGA       300

ACGAAATTGT AAATCAACCA AAAGCCCCAC TGAGTTGTTA GTTTTAATGC ATTCAAAGCA       360

TTGGCAATGA GGACAGTGC  AAAGGCAATA GTTGTTACGT AGGCAAGGAG ATTCATCTTG       420

CCCCCATATC CGATATAGTT GGTCACAAAG GCAAAGAGGA AGGCGATGAT GGAAATGATG       480

ATGGCCGCCA ATTTTACCTG TTTTTGGCTC ATTTGGTTGG GTCTGCCTTC TTGCGAAGCT       540

TCCCACTTCT TTATAGCAAA GGTATAAATG AGGAAGGTGA CGGGATAGGT AATGATGGCC       600

GCCTTATTTC CAAGGATATA ATCAATAGCA CCGGACAAAA TGGTATTAAC AATACCAAAG       660

TAATTTCCCC ATTTGCTTAA TTTCCCCGTG AAACGAGTGG ACAACATGGA AATCCCAACG       720

TTGGTTACGG AAATCAATCC AAAGGGTACA AGAGCTGTCC ATGATCCCCA GTCTACAAAT       780

TTATCGAGGT GTGAGTTGAG GTAACCAGAT GCAATCGCAA TCCCAACGAC CAAAGCAACC       840

CCGAAGAGGT CAAACTATTT AGATGTAGCA AAAATTTTTA GTGATTTTTT CATAGGTTAA       900

ACTACCTTTC TTTTTTTCAA ATATTCTCCC ACCAAATGAA AGTAAAATAA AATGATAGAA       960

ATAAACCCT  GAAAATAAAG GTTCTATAAT ATTTGTAGTG GGTAAATCCA CTATAGATAT      1020

TATGGAGCCT ATTTTATTGT AGAAAAAAAG TCCCATATGA CCTATAATGA AAAGCGACAA      1080

AACAACTCAT TAGAAAGAT                                                    1099
```

(2) INFORMATION FOR SEQ ID NO: 273:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2723 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 273:

1303

CTGGGATTCA CGTGAAAAGG AAGCCCAGAG AGTAGCCAGG TGTACTGCTA GAACAGTGAG   60

TGAAATTGAA TATTACCATA GAGAGTCAAC CCAGATAGCT CAGGCTTTAG TTGAAAATCA   120

AGCTCGTATC GAGGGAATCT ATAAATACTT TAGCCTTAGC ATGCCAGACT ATTTTTACTG   180

GCAATTAGAG CGGAAAGCTT CGCCTTATAT ATCAGTCTCT CTGTATGAAA ATGTTGATGA   240

CCTCTATGTT CGAAATGATT TTGTAACTGG GGTGGCCATT GCTTTTCAAG ATTACAAGGA   300

AGTCTATGTT TCTACTAAAG ACAAACGTAG GkkAGAAAAA ATCAGGGCTG AGGATTTCAA   360

ACCAGCAGGA AATAGTTTTG CCATTCCAGT GTCAGATCCA GTGTCAGATC AAGACTTAGG   420

AGTGATTTAC ATCTCCTTGG ATCCTGCTGT TTTATACCAT GCCATTGATA ATACTAGAGG   480

TCATACTCCG ATGGCAGTAA CAGTGACCTC ACCTTTTGAT ACGGAGATTT TTCATATGGG   540

TGAGACAGTT GATAAGGAGA GTGAAAATTG GCTAGTTGGC TTAACTTCTC ATGGATATCA   600

GGTTCAGGTG GCAGTTCCTA AAAACTTTGT TTTACAAGGA ACAGTGACTA GCTCTGCTTT   660

GATTGTGGGT TTGAGCCTTC TCTTTATTGT CATTCTTTAT CTGACTTTGA GGCAGACTTT   720

TGCTAATTAC CAAAAGCAGG TAGTGGATTT AGTAGAATCC ATTCAAGTCA TTGCTCAAGG   780

CGAAGAGGGG CGTCGGATTG ACATTTCCGA GAAAGATCAG GAATTACTCC TAATCGCGGA   840

GACGACCAAT GATATGTTGG ATCGATTGGA AAAGAATATC CATGATATTT ACCAGTTAGA   900

GCTTAGTCAA AAAGATGCCA ATATGCGAGC CTTGCAGGCG CAAATCAATC CTCATTTTAT   960

GTATAATACG CTGGAGTTCT TGCGCATGTA TGCAGTTATG CAGAGTCAAG ATGAGTTGGC   1020

AGATATCATT TATGAATTCA GTAGTCTCTT GCGTAACAAT ATTTCCGACG AAAGAGAGAC   1080

CCTCCTCAAA CAGGAATTAG AATTTTGCCG TAAATACAGC TATCTCTGCA TGGTTCGCTA   1140

TCCCAAGTCC ATTGCCTATG GTTTCAAGAT AGATCCAGAG TTAGAGAATA TGAAGATTCC   1200

CAAGTTTACC TTGCAACCGC TGGTAGAAAA CTATTTCGCG CATGGTGTTG ACCACAGGCG   1260

GACAGATAAT GTGATTAGCA TCAAGGCTCT TAAACAGGAT GGTTTTGTGG AAATTTTGGT   1320

GGTCGATAAT GGTAGAGGAA TGTCGGCTGA AAAGTTGGCA AATATCCGAG AAAAATTAAG   1380

TCAGAGATAT TTTGAACACC AAGCCAGCTA CAGTGATCAA AGGCAGTCTA TCGGGATTGT   1440

CAATGTACAC GAGCGTTTTG TGCTCTATTT TGGAGACCGC TATGCCATTA CTATAGAGTC   1500

TGCAGAGCAA GCCGGTGTTC AGTATCGTAT TACAATTCAA GATGAGTAGA AAGGGAGAAA   1560

ATGTATAAAG TATTATTAGT AGATGATGAG TACATGGTGA CAGAAGGTCT GAAGCGTTTG   1620

ATTCCCTTTG ATAAGTGGGA TATGGAGGTC GTCGCAACAG CCAGTCATGC CGATGAAGCT   1680

CTAGAATATG TTCAGGAAAA TCCTGTCGAT GTCATCATTT CCGATGTCAA TATGCCAGAC   1740

1304

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AAAACAGGGC TTGATATGAT TCGGGAGATG AAAGAGATCT TACCAGATGC TGCCTATATC      1800

CTGCTCTCAG GTTATCAGGA GTTTGATTAT GTAAAAAGAG CAATGAACCT TAGTGTGGTG      1860

GACTATTTGG TCAAGCCTGT TGATAAGGTA GAGCTGGGAA ATCTGCTGGA GAAGATTGCA      1920

GGTCAGCTCG GCGAGAGAGG GAAGAAAAGT CAGACTCTTA GTCAAGAATT AGACGAGGCT      1980

GGATTTGTTA GTTATTTAGG GGATAAGGAG AATTGGTGGA TAGGTCTATC CAAGGAAAAA      2040

CAAGGTTCCT TCACCATTCC CTACTATGTC TTGGGTCAAG ACTGGCAGAT TTTCATTTCT      2100

GGCCACCCCC TAGATGGTTT AGTCGTTACA CCTTTTGAAG CTCCTTATCA AGAACACTTT      2160

GAACGCTGGA AGCTGAATGC TGAGAAAACC CTCTTTTACG GTTCTGTAAA TCTGCAGCAG      2220

TCTGAGAGTC TCTTTGCCTA TTACGAACCG ATTTATAGGG TTATCATTCA GGGAAATCTC      2280

AATCAAATCG TAGAAGAGTT AAATCTCTTG GAGAAGGTAG TTCTTGAAAA TACACCTCGT      2340

GTTTCGATTA CTAAACAGCT TTTTATCCAG TTTGTCATGG ATGTTTTCCA TTTATTTGAA      2400

CATCTCAAAG CTGATGATAT GACGGACATT GTCAAAACCA TTCATGCTAT TCAATCCTTC      2460

GATGAATTGG TTTCTTATAT CAAGGAAACT CTGATCAGCT TTTTCGGTCA ATACCGTATG      2520

AATGAAAATG TGGTCAGTGT GCTGGAAGTC ATTGGTCGTG ATTACCAAAA AGAGCTTTCC      2580

CTCAAGGATA TCAGTAAGGC CCTCTTTATC AATCCTGTCT ATCTAGGGCA GTTGATTAAG      2640

CGTGAAACCG ATTCGACCTT TGCAGAGTTA CTAAACAAAC AACGTATTAA GGCTGCCCAG      2700

CAGCTCTTCC TTTCAACTAG TGA                                             2723
```

(2) INFORMATION FOR SEQ ID NO: 274:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 836 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 274:

```
CCGCAGTTTT TTTAAACCGT ATATAAGTAT AGCATAGTCA AAAAAAGAAT GCAAGATTTT        60

TGCAAACTTT TTTAAAATTT TTCGTAATTT TTCTTTTAAA GTTCTACTGT CAGGACTTGA       120

CCTTGCTTAA CAACCTGTTC TCCGGCGATA TAAACATCAT CTACATCACT AGATTTAACT       180

GCATAAACCA GGTGAGACAG CATATTTTCC TGAGGTTGGA GATGAATTTT CCCTTGTGGT       240

TGAATGACCA GAAAATCTGC TTGCTTGCCG ACTTCCAGAC TTCCTATCTG ATTTTCCATT       300

CCAAGGACCT TAGCCCCTTC GATTGTCAGT ACCTTGAGAG CTGTTTCGAT TGGAAACTGG       360

CTGGCATCCC CACTTTTCAT CTTCTGAAGA AGAGCTGCAG TCCTTCCTTC CTCAAACATA       420
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1305

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TCTAGATTGT TATTGGAAGC AACCGAGTCA GTCGCAATTC CGACTGCTAC TCCCGCTTTT        480

TGGAGCTGGA TAATTGGAGC AATTCCTGAT GCCAGTTTGA GGTTACTGAT AGGATTGTGG        540

GCGATAGCnA CTTGAGAAGA TGCCAAGCGT TCAATTTCTC TCTCGTTTAA TTCGACCCCG        600

TGAGCAAATA CGGACGGATG ATCTAAATAA CCCAGTTCTT CAAGAAAAGC AAGGGGGCGT        660

TTGCCGTATC GTTTGAGGAT AATTCCTGAC TCCTCCTTGG TCTCCGCCAC ATGGACATGG        720

AGCGGAATAT TTAGCTCTTT TGCCATTTCC AAACTCGCTT CCAGCAAGTC TCTACTGCAG        780

CTATACGGAG AATGAGGTGC TACCATAACC TTGAAATTTG GATTTTTATA TTTTAA           836
```

(2) INFORMATION FOR SEQ ID NO: 275:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 2335 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 275:

```
ATTTTATTTC ACTTTTTAGG TGGTCTGGGG CTATTCTTAT ATAGCnTCAA GACCATGGGA         60

GACGGTTTAC AACAAGCTGC TGGAGATCGC CTGGGTTTTT ACATTGACAA ATATACTAGT        120

AATCCTTTGT TTGGAGTTCT GGTTGGTATT GGGATGACTG CTCTAATTCA GTCTAGTTCT        180

GGTGTAACAG TTATCACAGT CGGCCTGGTC AGTGCCGGTC TCTTAACCTT ACGTCAGGCT        240

ATCGGGATTG TCATGGGTGC TAATATTGGG ACAACTGTCA CATCCTTTCT CATCGGTTTT        300

AAATTAGGTA ACTATGCCCT ACCTATGCTC TTTATCGGTG CCGTCTGTCT TTTTTTTACG        360

AAAAATCGGA CAGTCAATAA TATCGGACGC ATCCTCTTTG GTGTCGGTGG TATCTTTTTT        420

GCCCTCAATC TCATGAGCGG CGCAATGGCT CCACTCAAGG ATTTACAGGT CTTTAAGGAC        480

TATATGATTG AGCTAAGTAA GAATCCTGTT TTGGGTGTCT TTGTCGGTAC TGGCTTGACC        540

TTGCTAATTC AAGCTTCTTC GGCTACCATT GGGATTTTAC AAAACCTCTA CGCCGGCAAT        600

CTAATTGATC TACAGGGAGC TTTGCCAGTT CTATTGGTG ACAATATCGG GACAACCATT        660

ACAGCCATCA TTGCCTCTTT AGGGGCTAAT ATTGCAGCTA AACGGGTAGC AGGAGCTCAT        720

GTTGCCTTCA ACGTTATCGG AACAGTTGTC TGCGTTATTT TTCTAGTTCC TTTTACTGTC        780

CTGATTCATT GGTTTGAAGC TACGCTAAAT CTAGCACCGG AAATGACCAT CGCCTTTGCT        840

CACGGAACCT TTAATATTAC CAACACCATT GTCCAATTTC CATTTATCGG AGCTCTGGCT        900

TACTTTGTAA CCAAGATTAT TCCTGGAGAG GACGAGGTTG TCAAATACGA ACCCTTATAT        960
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1306

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CTTGATGAAC ATTTCATCAA ACAGGCCCCA TCTATCGCTC TAGGAAATGC TAAGAAAGAG    1020

CTCTTGCACT TAGGAAACTA CGCTGCTAAA GCCTTTGACC TTTCCTATAA GTACATCATT    1080

GACTTGGATG AAAAAGTTGC TGAAAAAGGG CATAAAACCG AAGAAGCAAT TAACACCATC    1140

GATGAGCAAT TAACACGTTA TCTCATTGCC CTTTCAAGCG AAGCTCTCAG CCAAAAAGAA    1200

AGTGAAGTGC TTACCAATAT CCTTGATTCC TCCCGTGATT TGGAACGGAT TGGAGACCAC    1260

ACGGAGGCTC TACTCAATCT GACTGACTAT CTTCAACGGA AAAATGTTGA ATTTTCTGAT    1320

GCCGCCTTGA AAGAATTAGA GGAAGTTTAC CGCCAAACTA GTGACTTTAT CAAAGATGCT    1380

CTGGATAGTG TGGAAAACAA TGATATTGAA AAAGCACGCA GTCTTGTAGA ACGTCATGAA    1440

GCAATCAATA AGATAGAACG TGTTCTCAGA AAAACCCACA TCAAACGCCT CAACAAAGGC    1500

GAATGTTCAA CACAAGCTGG GGTCAACTTT ATCGACATCA TCTCACACTA CACTCGTGTA    1560

TCAGACCACG CTATGAACCT TGCTGAAAAG GTTTTTGCAG AACAAATCTA AGAACCAAGA    1620

AGCTATCCAT CATAATTGGA TGGCTTTTTA CTTTTTCCTA AGCAAGACTA GGATGAATGA    1680

AACTGAAAGA GTATTCTGCA GATATATAGT CCCCAATTAT TCACCCCAAA TCTAAAAACC    1740

ATCCAGAATC CTTGCCTTAG CTTAGATCCT GGATGGTTTC TTTTTTCACC CAATGGGTGT    1800

TTTTTACTAG ACAAAAAAGA GTTTCCCCTT TATGGTATAA GTGTAGAAAA AAACACAAAA    1860

AGAAAGGAAA CTCACATGAA CAGTTTACCA AATCATCACT TCCAAAACAA GTCTTTTTAC    1920

CAACTATCTT TCGATCCAGG TCATTTAACC CAGTATGGTG GTCTTATCTT TTTTCAGGAA    1980

CTTTTTTCCC AGTTGAAACT AAAAGAGCGG ATTTCTAAGT ATTTAGTAAC GAATGACCAA    2040

CGCCGCTACT GTCGTTATTC GGATTCAGAT ATCCTTGTCC AGTTCCTCTT TCAACTGTTA    2100

ACAGGTTATG GAACGGACTA TGCTTGTAAA GAATTGTCAG CTGATGCCTA CTTTCCAAAA    2160

TTGTTGGAAG GAGGGCAGCT TGCTTCACAG CCAACCTTAT CCCGTTTTCT TTCCAGAACT    2220

GACGAGGAAA CAGTCCATAG TTTGCGATGC CTCAACCTTG AATgGkCGAA TTCTTTTTAc    2280

AGTTTCACCA GCTAAACCAA CTCATTGTAG ATATCGATTC TACCCATTTC ACAAC         2335
```

(2) INFORMATION FOR SEQ ID NO: 276:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 752 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 276:

```
CGGATTCACT GTTGTTGACT AATCAATAAC ACAGTAGAAA ATCTCACAGC AGTCTATTAG      60
```

1307

```
TTGCTTTTCA TACTAGGCAA GTGACTGAGG CTTGTACTTG GGTACAGCAA GGGAGCTTAA        120

GGCCGTAGAA GAGAAAAATA GTAGACTGAA AACCCGCAAG ACTTCATCAT TTCGAGAAGT        180

GACGTGGGAG ATGAAAATCG ATTGAACCAC TTACAAGGAG AATAGAAAAT GGCTAAAAAA        240

AGCAAACAAC TTCGTGCTGC TCTTGAGAAA ATCGACAGCA CAAAAGCATA CAGTGTAGAA        300

GAAGCTGTAG CACTTGCAAA AGAAACTAAC TTTGCAAAAT TTGATGCAAC TGTAGAAGTT        360

GCTTACAACT TGAACATCGA CGTTAAAAAA GCTGACCAAC AAATCCGTGG AGCAATGGTA        420

TTGCCAAACG GTACTGGTAA AACTTCACGT GTTCTTGTTT TCGCACGTGG TGCAAAAGCT        480

GAAGAAGCAA AAGCTGCTGG TGCAGACTTT GTTGGTGAAG ATGACCTTGT TGCTAAAATC        540

AACGACGGTT GGTTGGACTT CGACGTAGtT ATCGCTACAC CTGATATGAT GGCTCTTGTT        600

GGACGTCTTG GACGTGTCCT TGGACCACGT AACTTGATGC CAAACCCTAA AACTGGTACT        660

GTAACAATGG ATGTTGGCAA AGCGGTTGAA GAGTCTAAAG GTGGTAAAAT CACTTACCGT        720

GCTGACCGTG CAGGTAACGT TCAAGCAATC AT                                      752
```

(2) INFORMATION FOR SEQ ID NO: 277:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 2643 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 277:

```
GTCAACATTG ATTTCAAGGC TGTTTGCTTT CTATCTCCCC TTTTTCATAA TGTATAATAA        60

AATGAAATAA TAACAGGACG AATTGATCGG GACAGTCAAA TCGATTTCTA ACAATGTTTT        120

AGAAGTAGAG GTGTACTATT CTAGTTTCAA TCTACTATAT TTTCGTACAG GTGCTTCAAC        180

CATTTGAACG ATTTCAAATC CTTCTTTTTG GTAAAGATTC TGAGCTCTTT GATTTGCCTC        240

GAAGACATTT AGAGAAATAC TGTCTATATC TCTATTTTCA AATGCTAAAC TAACAAATTT        300

CCTTAAAGCC TTGCTACCTA AGCCTTGCTC CTGTTTCTGG GGGTTGATAA AAAATCTCCC        360

GATATGAAGA TTGCTGTCTT CTAGCCTGAT TTTCTGGATA AATCCCACAA ACTCTTGTTC        420

ATCAAAGATT GAAAAGACTC CTTCCAAGGC TTGAAGTGTC AGTAGAAAAG GAATCCTTGG        480

TCCCATCCAT TGTTCTTGAA AGGATTTGCC TAGGGAGTTG GACCACTGGC ATACAAATTG        540

AGCGTTTTCT GTGCTCACCT TTTCTTCAAA ACGAATTGTC ATCTTTTCCT CACCACCTTA        600

TCTATGTTTC TCCATTATAC TATTTCTCCC ATTTTTTACG AATAGATAAG TATGATTGAT        660
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1308

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TTTTATTTTT TTCTCGTCGG GAGCATTCTA GCTTCCTTTC TTGGTTTGGT CATTGACCGT        720

TTTCCAGAGC AATCCATTAT CAGTTCAGCC AGTCACTGCG ATTCCTGTCA GACTCCCTTG        780

CGTCCCTTAG ATTTGATTCC GATTCTCTCA CAGGTCTTCA ATCGCTTTCG CTGTCGCTAC        840

TGCAAAGTTC GCTATCCTGT CTGGTATGCC CTCTTTGAAT TAAGCTTAGG ACTCCTCTTT        900

CTGCTTTACT CTTGGGGATG GCTCTCCTTG GGGCAAGTCG TCCTAATCAC CGCTGGTTTG        960

ACCTTGGGTA TCTACGACTT TCACCATCAG GAATATCCCT TACTGGTCTG GATGACTTTC       1020

CAGCTAATCC TAATAGCTTC CTCTGGCTGG AATCTGGTCA TGGTCTCCTT CCTCATACTT       1080

GGAATTTTGG CTCATTTTAT CGATATCCGC ATGGGTGCAG GGGATTTCCT CTTTTTTAGCT     1140

TCTTGTGCTC TCGTCTTTAG CGTAACGGAG TTACTGATCT TGATTCAGTT CGCTTCTGCG      1200

ACGGGTATCC TGGCCTTTCT CCTGCAAAAG AAAAAGGAAA GACTTCCTTT CGTGCCTTTC      1260

CTCTTACTTG CTACTTGTTT GATTATTTTT GGTAAGCTAC TGCTTGTCTG ATAAAATCCA      1320

ATTTCTGCCA TATATCCTTC ATGAAATTAT TTCACAGTTA AATTATAAAT TATTTCTTTT      1380

GTACAAAGGG ATGATGTTAT CAAATCGATC TGTTCTTCTA TCTTCTTGAT ACTGATCAAA      1440

AAATTTCATT TCGACTGAAA ATATTTCGCT TATAAACTGT AAACGAATAC TTTGTTTAGA      1500

CATTATAGTC GCTAGACTGA CTAGATGATT ACTCAAAACG ACGTCCAGAA TACTCTTTAC      1560

TTTGCTTGGT TTTTTAACAA AAATTTGATC ATCCAAGGGT TCAATCATTT TGTAACCTTT      1620

TTGCGCAATT TGACGATAAA AGTAAGAATG TTGCTTTGGA CTCAATAATC CTAACTTAAA      1680

AGCTCGATAC TCTAAAGCCT GTATCGAAAC ATTCAAATCC GACTTCAATA AAATATAACT      1740

ATCAGGATTG CTGACACGCT TGCCAACCCT CTCTTCAAAT TTGACTAAAA ACTCTTCTTT      1800

TGGCAATAAA AAACATGATG CAAAATAATT TGCTTCTTGC TCCAAACGAT CGCCATCTTC      1860

ATTCATATCT TTATATTTAT GTAAAAGAAT ATGTCCTAGC TCATGAGCTA AGTCAAAATT      1920

TCGACGTACA GATGATTTAT TCGTTCCTAA CACAATATAA GGTCTTCCCA ATTTTGACCA      1980

TGCGCTATAA GCATCAGCTT GGCCATTAAT TAATCGTTCC ACGATATAGA TGCCTGAACG      2040

TTCTAATTTA TAAAGCAAAT CATGATTATC TTTTGAAATA CCTAATTTTT CCCTGGCATA      2100

AAGAGCCAAT TCCTCAATGG ATTCTCCCTT ATGATAAGAT TCACTCACTA CATTACTTAG      2160

GTCATGAATT ATAATATTAG GTATAATTAC AAAACTTTCA AAATAATCAA TCAAACTATC      2220

TACCTTATGT AAATACATAG TTTGAATATC TATTGTTTTC CGTGTTGCTA GGTCTGCATT      2280

TCTAAAGGCA ATTACAGAAG AATCAAATCG AATGCTCTCT TCTTCCTGTT CAAAATAAGT      2340

TAAATCAACA TGAAATTGGT TGGCCAAATG CATTTTGGTT GATAATTTAG GTTTCGTTTC      2400

GTTGGACTCA AACTGCCAAA TGGCTTGTTC CGTTAAATTA ATTCTCTGAG CTAATTCTGC      2460
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1309

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TCTACTTAAA CCATTTAACA GCCGTAATTC TTTCAATACC CGACCATTAA ACATTTACAT      2520

ACTCCTTACT ACTTTTGACC TTCTTGTTTT TCTATTCTTG GAATAATTTC AAAATCTTCT      2580

GTTTCCGATA ATTCTGAAAA ATTAGGAATA TCTTGATATT TAGCTTCTTC GAAATGGTAC      2640

GGG                                                                   2643
```

(2) INFORMATION FOR SEQ ID NO: 278:

     (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 582 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: double
       (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 278:

```
TGACCAGTGG CAAAATGGCT ATCCAAATGC AGATGTTATT ATCGATGATA TCATCTCAGG       60

GCAAGCCTAC GTAGCCTTGG AAGAGGGAGA ACTGCTAGCC TATGCTGCTG TGACCAAGAG      120

TCCAGAGGAG GCCTATGAAG CTATTTATGA GGGAAACTGG CAAGCTGGAG AGTCAGAGTA      180

TCTAGTCTTT CACCGTATTG CTGTGGCAGC AGATGTGCAG GGAAaAGGAG TTGCTCAAAC      240

CTTCTTAGAG GGCTTGATTG AAGGTTTTGA TTATCTTGAT TTTCGCTCAG ATACGCATGC      300

TGAAAACAAG GTTATGCAAC ATATTTTTGA AAAACTTGGT TTTAAACAAG TCGGTAAGAT      360

GCCAGTAGAT GGCGAACGCT TGGCCTATCA AAAATTAAAG AAATAATGCA AAAGAAGTAT      420

GTAAAAATCC TCTACTCCTC ACCAATTGGT ATTCTATCAC TTGTAGCTGA TGACCATTAT      480

TTGTATGGAA TTTGGGTTCA GGAGCAGAAG CATTTTGAGA GGGGACTAGG AGATGAAACG      540

ATAGAAGAAG TTGTwAGTCA TCCTATTTTA GACCCAGTTA TT                        582
```

(2) INFORMATION FOR SEQ ID NO: 279:

     (i) SEQUENCE CHARACTERISTICS:
       (A) LENGTH: 554 base pairs
       (B) TYPE: nucleic acid
       (C) STRANDEDNESS: double
       (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 279:

```
CCCAAGCTAC TAAGAGACTA AAACTTGCTA GAGAAGCAAG AGAAAGTGTG AATCTTTTTA       60

ATTTCATGAT GAATTTCCTT TCTGCTACCA ATTTAGAGAA ATTTTCTCTA ACCAGCAATT      120

CCCCTAGTAT AACAAGTTCA AAAAATGGAG TCAATTTATC TGCTCACGGT CCAGCAGGTA      180
```

1310

GCCCCGTACT TCTGAGATAA AATAGAGAGA CCCTGTAACG AACAGCAAGT CTTGAGCGTC   240

TGCCCTTTCT TCAAAATCGC TGATAAATTC TCGGTAAGAA GAAACTATAT CGTAACCTGT   300

CACATCCCTT TCGTCCAAAG CCCCCTGATA GTCAAAGCCG GTCACCTTGA GTTCCACCTG   360

AGGCAATTTT TCAGTCAGAT AACCCAACAT CCCTTGATAA TCCTTACGTT TCAAGGATCC   420

AAAGAGGATT TGAGGTCGAT AGCCTTCCTG CTCTTTTTCT TTGATAAACT CAGCCAAGCG   480

AGTCAAGGCA GGGAGGTTAT GAGCACCATC CAAATAAATC TGTGGGCGAA TACGCTCCAA   540

GCGAsCAGCC CAAT   554

(2) INFORMATION FOR SEQ ID NO: 280:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 766 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 280:

CCGGTTTTTC AAATGAATTT CTTGGTTGTG GCTAAAAAAT ATGCTACACT ATCAATATGA   60

AAATTTTAAT CCCAACAGCA AAAGAAATGA ACACAGACTT CCCAAGTATC GAGGCAATTC   120

CTTTAAAACC AGAAAGTCAG GCCGTGCTTG ATGCCTTGGC TCTCTATTCT GCCAGTCAAT   180

TGGAGAGTTT CTACAAGGTA TCAGCTGAGA AAGCGGCGGA AGAATTTCAA AATATCCAAG   240

CTTTGAAAAG GCAAACTGCT CAACACTATC CAGCCTTGAA ACTTTTTGAT GGGCTTATGT   300

ACCGCAACAT TAAGAGAGAT AAGCTGACCG AGGCGGAACA AGATTATCTT GAAAATCATG   360

TTTTCATTAC CTCGGCTTTG TACGGTGTTG TTCCAGTCTT GTCACCCATG GCTCCTCACC   420

GTTTGGATTT TTTGATGAAA TTAAAAGTCG CTGGTAAGAC TTTGAAGAGC CATTGGAAGG   480

CAGCCTATGA TGAAACTCTG AAGAAGGAAG AAGTGATTTT CTCTCTCTTG TCATCAGAGT   540

TTGAGACTGT ATTTTCTAAG GAAATCAGAG CAAAGATGGT GACCTTCAAA TTCATGGAGG   600

ATAGAGGCGG TCAGCTGAAG ATTCACTCAA CTATCTCCAA GAAAGCGCGC GGGGCCTTTC   660

TAACAGCTTT AATAGAAAAT CAAGTACAAA CTGTGGGGGa AGCACGTCGC TTGAACTTTG   720

CTGGATTTGT TTACCGAGAA GATTTGTCAC AACCACAGGG GGATGG   766

(2) INFORMATION FOR SEQ ID NO: 281:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 901 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

1311

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 281:

CCGGCCACGG TTCCATCCAA CTTCACAGGT GTGCACTTGA TTGTGTATGT AATTGTCACT   60

AACGGTAGAA TTTCACCTAT CCCTCCTATC TGCTCGCAGT ACCCGCAGAC TTTCTGAAAG   120

AAGAAGATAA CCTACTTATC CGTTGCTATG ATTATACTAA AGTTTCTACT TTTTTGCAAA   180

TAGATTTTTA AATTTTTGGC TAATTGTCTG AATCAGGGTC GGAAGTTTGA CGACCTTGTC   240

ATTGCCTAGT TTTTCGCGTG CAATTTTGAG AATGGCACCT GAGTCTTTTG AAGCAAAGAG   300

GAATTTTCCT TTGTCTGTAA AGACTTCGAA GTGGCGGCTG ATTTTGCGTC CAGTGACATT   360

GGCTCCAATC TGATTGATAT GGCTCCAAGG AATCTGGATA AATTGTTCGA CATTGACATC   420

TGGGTAAAAT TCCAAAGCCT GATCTCCGAC AAGGAATTTC CCAACTTTCC CAGCGATAGA   480

GAGGTAGGAA GTGCCTGTCG TACTGAGGAG TACTGTTTTG TTAAGTGATT GGGCCATGCT   540

TAGTCTTCCT TACTTTCTCC AAAAAAGGCA TTGTAGAGGC CTTTAATTGC TGCTTTCTCT   600

TGGTCTTTAT TGACAACAAA CATAATAGAA ACTTCACTAG AACCTTGAGA CATCATCTGG   660

ATGTTGATTT TGTTTTCAGA TAGAGCGCGT GTCGCAGTAG CAGTCACTCC GATATGGCTC   720

TTCATTTTTT CACCAACAAT CATAATGATA GAAAGGTCGT GTTCGATTTC TGCATGATCT   780

ACTTTAGCCT TTTGAACCAA CTGACGCAGG ATTTCTTCTT CCTTGATGGG AGTTAGTTGG   840

CGAGAACGGA GAATGATAGA AAGAwCGTCG ATACCTGTTG GCATATGTTC CCAACCGATG   900

T   901

    (2) INFORMATION FOR SEQ ID NO: 282:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 1765 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 282:

CCCTGTTACG TGGATAATAG GGTAAGACTG CTCAGGATTT CCTAACAAAT CCACCGCTTG   60

CTGCATTCGA CCCAAACCTG ATCGAAAATT CAAACCAATC CGACTATGGA GCCATTCTTC   120

TACTTCAAAC ATACACATCT CCTTGACAAA AGTCCAATCA ATTATCGCAT TAAAGTATGG   180

TTACTAATAA AAACAAGGCC AGGATTTTCG TCCCGACCTC TTACCTGGTT AGCTAATAAC   240

TAGCTACTAT GAATGTGAAT ATGGGCTAAA AACATCCACT GGACGTTCCA ACTCTTCCCC   300

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                                    1312
ATTTCTGGGA GTTGGGGTAA AAATGTTCAC TGGACGTTCC AACTCTTCCC CATTTCTGGG        360

AGTTGGGCTG ATACAGTCTC CCAGACTGTA TCACTCCTCC ATAAAGCTGT TGAAGACTTC        420

TTCAATCATG TTCCATTCGT CTTCTGAGTC TTCTGGGATT GGTTGCAATT CGCCTTCTGT        480

TCCATCTTCG TTTTCGATGA ATGAGTAAGC TTGGATTTCA ACTTGTCCGT CTTCGTCTTC        540

TTCTGCGTTA ACTGGTACTA GAAGAACATA GTTTTTACCA AATTCTTCTT TTCCATCAAT        600

TGTCAAAAGG ATTTCAAACA AGGTTTCATT TCCTTGCTCA TCTACTAGTG TGATTAGTTC        660

ACGTTCTTCG TGGTCGTGGT TATGATCGTG TGACATAGCC TCGCCTTTAT ATTAAAATTT        720

TCTATCTAAA TAATTTTGTA AAATCAGCTG AGCTGCTAAC TTATCAATGA CTTTCTTGCG        780

CTTATTGCGA CTGATATCTG CTTGTTCAAT CAACATGCGC TCAGCAGCCA CTGTTGTCAA        840

GCGTTCATCC TGATAGTCTA CTGGTAAACC AAAAAACTCT TCTAGCTTTG CTCCGTAGCT        900

TGACTAGCTT CTACGCGCGG TCCACTTGTA TTGTTCATGT TTTTAGGCAA GCCCACTACA        960

AATCGTTCCA CCTTGTAAGT ATCAACCAAT TCCTTAACGC GGTCAAAACC AAATTGGCCT       1020

TGTTCTTCAT TTATCTGGAT GATTTCAAGC CCTTGAGCTG TAAAACCAAG CGGATCGCTA       1080

ATCGCCACCC CTACCGTTTT TGAACCGACG TCCAATCCCA TAATTCTCAT AGGTTATAGA       1140

TCGACTCCTT GTCCTTTGAG GTAGTAGCGA ACCAATTCCT CAACGATTTC ATCACGCTCA       1200

TACTTACGGA TTTGATTTCG TGCATTATTA TAACGAGGAA CGTAGGCAGG GTCTCCACTC       1260

AATACGTAAC CTACGATTTG GTTAATTGCG TTGTAACCCT TATCGTTCAA CGAAGCATAA       1320

ACATCTGTCA AAGTTTCGCT AATTTCTTTT TTATTGGAAT CGTCCAATTT AAAACGTACT       1380

GTTTCTTCAG TAAATCCCAT TCTAACACCC TCTTTCCTTA GAATAGTACC ATTATAGCAT       1440

AATTCCTTAC CTTCTACAAT TCAGGCAGTC TATTTATTTG GATTTTCTAT TGTTCTGTCG       1500

CGCCATTTGC CAATCTATCT GAAATATATT TGCTTGGTTC ATTTTTCAAA AGATTTTCCA       1560

AACCAATATT CTTCAGATGT TCCAACTGGG AAGCCTTCTT GACATCCAGA ACTTGAAAAT       1620

CAAAACTAGT CGTTGTTTGA AGTTCCGTTG CGCTCAATAG TTTTGTTTCA AGTTTGAAAC       1680

CTGCCAATTT ACGAGCTTCA ATGATAGACT TATCCTTCTC CTCCGCTTCA AGAAGAGCTT       1740

TTTGAGTTTC CTCCACTCCA TGTTG                                            1765
```

(2) INFORMATION FOR SEQ ID NO: 283:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1346 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

1313

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 283:

```
CTTATCCATT CACTTTCTTG TCTGTTATTC TATAAATCTT ACTCCTAAGT ATACCACATT        60

TGCCCCTAGA TGTGAACGAG AGAAACGCTC TAGACATTGC CAAGAAGGAA AAAAAAGGGT       120

ACAATGTAAC AAAATCAAGG GAGGTCTGGA ATGAAGAAAC AAAGCAAGTA CAAAGAGGTC       180

GTTTCCTATC TGAAAAATGG TATCGAGTCT GGACGATTTC CGACGGGTAG TCGCCTGCCT       240

TCTATCCGTC AACTGAGCCT TGACTTTCAC TGCAGCAAGG ACACCATTCA ACGAGCCCTG       300

CTGGAATTAC GGCACGAACA ATACCTCTAT GCCAAGCCTC AGAGTGGCTA CTATGTATTA       360

GAACAAGGGC AACATCAAGA CCTAGAAATC GAGGTTACCG ACGAACATGC CAGTGCCTAT       420

GACGATTTCC GACTCTGTGT CAATGAAACC TTGATTGGCC GAGAAAACTA CCTCTTCAAC       480

TACTATGACA ATCAAGAAGG ATTAGAAGAC CTAAGACAGT CCATTCACAA ACTCCTCTTT       540

GAGCAAGCTC TCTACTGCAA GGCTAACCAA CTAGTACTGA CTTCTGGAAC CCAACAAGCC       600

TTGTTTATCC TCTCTCAAAT ATCCTTTCCT AGACAAGCCA AGGAAATCTT GGTGGAACAG       660

CCAACCTACC ATCGGATGAA TCGCCTCTTG ATTGCACAGG GGCTGGACTA TCAAACGATT       720

GAACGAGGCA TTGATGGGAT TGACTTGGAG GAGCTGGAAG GCCACTTCAA AACAGGAAAA       780

ATTAAGTTTT TCTACACCAT TCCCCGATTT CACTATCCCC TGGGACATTC CTATTCTGAG       840

CAAGACAAAC GATCTATTCT TAACTTAGCT GCCAAGTATG ATGTCTATAT CGTAGAGGAC       900

GATTATCTGG GTGATTTGGA CTCCAAGAAG GGCCAAACCT TCCACTATCT TGATACAGAG       960

GAGCGTGTCA TTTATATCAA GTCCTTCTCG ACCAGCCTTT TTCCTGCCCT TCGTATTACA      1020

GCACTCATTC TTCCAAATGC TATCAAAGAA GCATTTGTGG CCTACAAAAA TATCCTAGAC      1080

TACGACAGCA ACCTCATTAT GCAAAAGGCC CTGTCACTCT ATATTGACAG TCAATTGTTT      1140

GAAAAAAATC GTTTGGCTCG CTTGACCAAT CATGAATCTT ACCAAAAACA AATCGAGGAA      1200

AGGATAACTA AAACACCTTG TCCCCTTCCT CATTATTCCC TACACGATGG yTTATTGCTA      1260

GACCTGAGAC AGTATCCTAA AATCGCCAGT CTCAAACACA GTCAACTGGG cTTGGACTTC      1320

TTTGAAGAGG CCTATTTAAG CACCTG                                          1346
```

(2) INFORMATION FOR SEQ ID NO: 284:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 900 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

1314
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 284:

```
CTATATTCAG AATATGCCAA AAATTCGGAA TGGTATAAAT TTGCGGAGGG TTCATTTGAC      60

ATATTTAGAA AACTCCCCCA AAGAATTAAT TTTAAGAAAG ATTTTTCTAG AATTTTGGCC     120

CCCTTTATTA TTAATTTGCT TAAATTAATC AATAATTATC TAGAGAATAA AGAATACGAG     180

TGGATTGACA AGAATGGAAA TATTTTTTCC TCTCTAGTAT TTTATTTAGA AGATTTAATC     240

TATCCTTGGA TTGTTAAACC TTTGGTTTTA GAGATAAATT CATTGCGTGA AAAAGGTTTA     300

CTTGAAGGGG AATCGGAGCA GCAACGGTAC AAATATTTTA TAACATTGTT TGACAAGGAA     360

GAGAATATAT TAAATTTTTA TAACAAATAT CCCGTTTTAC TGAGGCAAAT ATCGGAGTCT     420

TGTCTTCGGT TCTATACTTA TTTTATAGAA ATTTTATCAA ATTTAGAAAA TGATTTTAGT     480

GTGCTAGAAG AAGAATTAGG GCTAAGGGGG AAATTAAATG ATATAAAATT TGGAAAGGGT     540

GATACACACA GCCAAGGAAA AACTGTTTTG ATACTCTTCT TTGATGACGC GAAAATTGTT     600

TACAAGCCTA AAAATTTAAT AATCAATAAC TCACTAAAATA CTATTGCTGA GTATATCCGA     660

AAGGTTGATG AAAAAAATTAG GATAAGAATA CCTCGAACTA TTGCTTATTC GGATCACAGC     720

TATGAAGAAT TTATTGATTA TCTACCTCTA GAGCAAAAGA AAAATTTACC TGAATATTAT     780

TATAATTTTG GTGTGCTTTT AGCATTTATA TATTTATTTA ATGGGAGTGA TATACATTTT     840

GAAAATTTAA TTTCCTATGG AGATATGCCT GTAATAATAG ACTTTGAAAC AATGTTACGG     900
```

(2) INFORMATION FOR SEQ ID NO: 285:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 862 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 285:

```
TTATTTAGCA GAGGCAGTTT TAAATGTGAA GGATTTGGTC AGTCAAACAG TTTTTTATCA      60

GCAGATTATT GGTTTAGAAA TCCTATCTCA AACGGATACA GAGGTCGTTC TGGGACTTGG     120

AGGAAAAGCC TTGGTACACT TGATTCAAGC ACAAGAGGGT GGAGAAGTAA GGGAACATTA     180

TGGTCTTTAC CATCTGGCTA TTCTTTTGCC GACACGAAAG GCTTTGGCGG ATGTCTTGAA     240

GCACCTGACG GATTTACAGA TTCCTCTTGT TGGCGGTGCA GATCACGGTT ACAGTGAGGC     300

CCTTTACTTA GAGGACTTGG AGGGAAATGG CATTGAACTC TATCGAGATA AGCCAGTTTC     360

CACATGGGAT ATTCGAGAAG ATGGACGTAT TATCGGGGTG ACTGAAGTCC TTGCGGCTCA     420

GGATATCTAT GAGTTGGGGG AAAGAGTAGA GCCTTTTATC CTAGCAGAGG GTACGAGAAT     480
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1315

GGGGCATATT CATCTTTCTG TCAAGGATAG TCGAAAGTCC AGACAGTTTT ATCAAACGGT   540

GTTAGGGCTC GAGGATAAAT TCAGTGTGCC TAGTGCTAGT TGGATCGCAG CTGGGGACTA   600

CCATCATCAT TTAGCAGTCA ACGAATGGGG AGGAAAAGGT CTGGATCCGC GTAAACAAGT   660

CCTACCAGGT TTAGCCTACT ATGTCATCGA AGTCGCACAT AAAGAAGAAC TGTTAACGAT   720

TGCCCAACGA GCACAAGAAG TTGACGCACC AATCAAATGG ATGACATCGA TCCAATTGGA   780

AATCACAGAC TCAGATGGCA TCGTGACCCG TATTCGTTTA GCTAGATAGA TGGTATGTGA   840

TGAAGGTAGA GCATCAATTG TA   862

(2) INFORMATION FOR SEQ ID NO: 286:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 650 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 286:

TCGTTTACAA GATCGCTAAA ATGCATCTCA TGATCGCGAC CACGAATTCC AAGATAGCAC   60

GCGCTACCTC AATCATAGAT AGTTCACTTT TTTCTTGCCC AGCAAATACT TCTAATTCCA   120

AAGCGTTTCT CCTCATTTAT ACTACTATCG CCAGAGCGAA CAGACTCTGA CCTCATTTTA   180

TCATTTACTC TTTATTTTAC GATAATTTTG CGGAATAGTC AAAGGTTAAG GGGGAGAAAG   240

TGGCAGGATT AGACTAATTC CAATATAAAA CTCATTCCTT TTTCTGTTGC TCCATTTTCC   300

ACAAATCCAA GCGACTTGAA ACACCTCCTA GAAGCATGAT TGTAGGTGTA GATTTTCTTG   360

ACTCTCAATT CTTTCCATCC TTTTACTCGA GCCAATTCAA TCAAAGCACT TAGAATCTTT   420

TTTCCAAGTC CTCGATGTTG GTAAGCGGAA TTCCCAATCA CAATGGGGAG ATTATCCTGA   480

GATAGTGTAA TATCCCCAAT TGGAAACCAT TCTCCCTTCT CCTTGACTTC AATCCAAAAA   540

AGCTCACCAT GCCGATyCAr ATAGGAATAC ATGGCTTCCA AGGTCGcTtG ACTGTAAGGA   600

AGCTTCACCC CATCTACGAG GtAAcCAAGT TCACATCCGT GATACCAAGC   650

(2) INFORMATION FOR SEQ ID NO: 287:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 1119 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

1316
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 287:

GATAGCAATC CGCTTCAGAA ACTTCTCGCT TACCTCTAAC TCCGATCGCT AGTTTGGGAG   60

AAGATACTTC CATTCTCATA CTATCTGTTG GCTTTGCAGG CTGTAAAAAC AACTTTTCTC   120

TTGCTACTTC CTGAAAATCT GAATCTTGCA GTTCTTTGCT TTCAAAATAG TCCTGTACTC   180

GCTCCACATC AAAATTCCCA GCTAAAGACA GAGACATGTT TACAGGTTTG TAAAACTTTG   240

TAAAATTTTC TTGCAAATTA GTTAGATTGA TTTGGGAAAT GGACTCCTCA CTTCCAACTA   300

TATCAGTTGC TAAAGGTGTA CCAGGATACA AATTCGCTAA AGTTGAAAAG AATAAACACG   360

AATCTGGATC ATCTTGGTAC ATTTCTCGTT CTTGCTGAAT AATATCCTGC TCTGTCAGAA   420

TGGAAGCTTC AGTAAAGTGT GCTGATGTTA CCAATTCATC AAGTAAATCT AAATTTTCTA   480

AAAAATAATC CGTTGCTGAA AAAAGATAGT TTGTTTTTGT AAAGCTTGTA AAGGCATTAC   540

TATCTGCACC TAGACTCGTA AAAGCCGACA TCAAATCACT AGAATCTTCT CTCTCAAATA   600

ATTTATGTTC AAGAAAATGA GCAATTCCTC CAGGATATTG TTTTACATCT CCGTCAACTT   660

CTGTGACAAA CGTATCTACC GAACCAAACT GTACAGTGAC ACTCCCGTAA ACCTCTTTAA   720

ATTCCTTTTT AGGCAAAAGA GCAACTGTCA ATCCGTTGGC CAAACGAGTT CGATAAACCA   780

TTTCTTTTAC AGCTGGATAG TATTTTTCTT CAAAAACAAC CTTTGTCATT CTATTCCTTC   840

CATAAAGTAA ATCGCTTGTA GTTTCACATT ATTAGCTACT CTACAAATAG CATCTTTGTC   900

AATTTGTTCA AGCTTTGCAA TCCAACTTTT AAAGTCTGCT GAAGATTTTC CAAATAAGGC   960

ATTTTGATAA GCACGTTCAA TCAATGAAGA ATGATTATCT TGAGAAAGTA ACAACGACCA   1020

ACGAATCATT TCCTTGGTCT GATTTAACTC AAACTCTGTA AAAAAACCTT TTTTTAAATC   1080

AAGCCGTTGA TTATTCATCA ATTTACGAGC CTGGTTACG   1119

(2) INFORMATION FOR SEQ ID NO: 288:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 540 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 288:

ACGCCCTCGC GGGGACATGA CGAATTCCCC GTTCATCACG AAGGCCGCCG AGGAGTGGGG   60

GGTGCCGTCC AAGTCAAAAG CGGCCCCACA TCGATTCAGT TCCCCGACGA ACAGCCCTTT   120

CCCCCAGCGT TCCTGGCTTT GCAACCGTTT CACAACAGCC TCGTAAAGTA GGCCGGACAA   180

GGCAGACGGA CTCCAAAGGA GTTCTTCCAT CTGCAAGTGC GCCTGCGTTA TGTGATCCCG   240

1317

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GTCTTTTGCA TGTGTGTGGC ATGAATGCTG TTCCCAATCC CACTCCAGAA CATTCTCCTC          300

AAAAGTGCGC AACGTCGCCC TGAATGAATC CTGCCTTGTA GTCGTGACCA TTCCTATGAA          360

GGGTCGCAGA GGATTTTCCC CGAGTGCAAG CGCATCCTCC GGCTCAAATC GGGTGCATTT          420

CACAGTCCCG CTCAACGCTA GCCCGATCCC TTTTTGGCAT GGTGACTCAA GCGTCCTTTC          480

AAACAAAAGC TCCTCATCCG CTCCAACCGG CCCGACGTAG ACGCGTAGAC CGAAGTCGTC          540
```

(2) INFORMATION FOR SEQ ID NO: 289:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 1949 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 289:

```
AAAGAATTCG ACCAATTCAA GGTTGAGGCA TCGCAAACTA TGGACTGTTC CCCCGTCAGT           60

TCTGGACAGA AAACGGGATA AGGTTGGCTG TGAAGCAAGC TGCCCTCCTA CCAACAATTT          120

TGGAAAGTAG GCATCAGCTG ACAATTCTTT ACAAGCATAG TCCGTTCCAT AACCTGTTAA          180

CAGTTGAAAG AGGAACTGGA CAAGGATATC TGAATCCGAA TAACGACAGT AGCGGCGTTG          240

GTCATTCGTT ACTAAATACT TAGAAATCCG CTCTTTTAGT TTCAACTGGG AAAAAAGTTC          300

CTGAAAAAAG ATAAGACCAC CATACTGGGT TAAATGACCT CCATCGAAAG ATAGTTGGTA          360

AAAAGACTTG TTTTGGAAGT GATGATTTGG TAAACTGTTC ATGTGAGTTT CCTTTCTTTT          420

TGTGTTTTTT TCTACACTTA TACCATAAAG GGGAAACTCT TTTTTGTCTA GTAAAAAACA          480

CCCATTGGGT GAAAAAAGAA ACCATCCAGG ATCTAAGCTA AGGCAAGGAT TCTGGATGGT          540

TTTTAGATTT GGGGTGAATA ATTGGGGTTT TACAATATCA ACTCCCATGA TAGTCATGAG          600

ATGACTCTTC ACGAATTGAC GTGATGACTG TCCTTCCTTT TGCATAATTA CCTCCGAAAC          660

ACAAAAAAAG GGGTAGACAA TCTAGTGTCT ACCCCCGAAA GTTTATTAAA ACAAAAATCC          720

TGCCAAAGAA TTTTTGGCAG GAAACCAAAT CAATTTATCA GTTTCTATCA ATCGCTTATC          780

GCTCTCAAAG ACTGGTAAAT AGGGATTCCG CAATCAAATT GCGATACTCT ATTATTTAAG          840

AGTAACTGAA GCTCCAGCTT CTTCCAATTT AGCTTTGATT TCTTCAGCTT CTGCAGTTGC          900

AACGCCTTCT TTAACAAGTG CTGGTGCACC GTCAACAAGT TCTTTAGCTT CTTTAAGACC          960

AAGACCAGTG ATTTCACGTA CAACTTTGAT AACGCCAACT TTTTTGTCGC CTGCAGATGT         1020

CAATTCAACG TCGAATGAAT CTTTAGCAGC ACCAGCATCA GCTGCATCAG CTGCAGCAAC         1080
```

1318

AGCTACAGGA GCAGCTGCAG TTACACCAAA TTCTTCTTCG ATAGCTTTTA CAAGGTCGTT   1140

CAATTCAAGG ATTGAAGCTT CTTTAATTTC AGCAATAATG TTTTCAATGT TCAATGCCAT   1200

TGTTATTTCC TCCAAATAAG TTTTAAATTT TATAATAGTT TTTTTCGTAG CTAGksTACG   1260

CTGTGTAGCT TAAGATTAAG CCGCGTCTTC TTTGCTTTCT GCAACCGCTT TGACTGCAAG   1320

AGCAACGTTG CGCACTGGCG CTTGAAGTAC AGAAAGGAGC ATAGAAAGAA GTCCTTCGCG   1380

GTTTGGAAGA GTTGCAAGTG CAAGAATCTC TTCTTTAGAT GCGACAGCGC CTTCGATTGC   1440

ACCACCTTTA ATTTCAAGTG CTTCAGCGTT TTTAGAAAAG TCGTTCAAGA TTTTCGCTGG   1500

TGCGATAACA TCTTCATTAG AAAATGCTAC TGCAGATGGT CCAACAAATA CAGATGCAAG   1560

ATCTTCAAGA CCAGCTTTTT CAGCTGCACG ACGCAAGATT GAGTTTTTAA TAACTTTATA   1620

CTCAACTTCG CTTCCACGAA GCTCACGACG AAGAACTGTA TCTTGCTCAA CTGTCAAACC   1680

ACGAGCGTCT ACAACGACGA TAGATGCAGC AGCTTTCATT TTTTCAGCTA tACGTCAACT   1740

AGTTCCGCTT TTTTAGCAAT AATTGCTTCA CTCATTAGTG TGTTCACCTC CGTAATTATT   1800

TTGCTTGGGG AATTTTTCAA AAAGAAAAAC GCGCCCAATC CTAGACACGA AAGTACAATA   1860

CGCTTCTTTT TACATGATAC GTTTTGTCCT CGGTAGGATA TTTATGAGTC GAGCTCCCCT   1920

ACTGTCTTAG GCAGTTTTTT TAGATACGG   1949

(2) INFORMATION FOR SEQ ID NO: 290:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 1023 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 290:

GGACTGTTTG ATCTTATACA GTAGCTGCTT GATCCAAGCT TTCACCGATA GCGGCTAGGC   60

GCTCGATAAC TTCAGCTTGT GTCAATTCAT TTTTTGAAAC ATAGCGGTTA CGTGGGTGAA   120·

CACGGCACTC GTGTGAGCAT CCACGAAGGT ACTTGTCTTC ATTTTCTTCT GATGTCAAGA   180

TACGACGGTT ACAGAATGGA TTTCCACAGT TGACATAACG TTCACATGGT GTTCCATCAA   240

ACCAGTCTTT CCCTACGATA GTTGGGTTGA CATGGTTGAC ATCAACGGCA ATACGCTCGT   300

CAAAGACGTA CATTTTCCCA TCCCAAAGCT CACCTTGAAC TTCTGGGTCT TTACCGTAAG   360

TTGCGATTCC TCCGTGCAAT TGGCCGACAT CTTTGTAGCC TTCACGGACC ATCCAGCCTG   420

AGAATTTCTC ACAGCGAACG CCACCTGTAC AGTAAACCAC GACACGCTTG TCCATGAATT   480

TTTCCTTGTT ATCACGGACC CATTGTGGTA ACTCACGGAA GTTGCGAATA TCTGGGCGAA   540

1319

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TAGCTCCACG GAAATGTCCT AGGTCGTACT CATAATCGTT ACGTGTGTCA AGGACAACGG        600

TATCTTTATC AAGAAGCGCT TCTTTGAACT CTTTTGGAGA CAAGTAAGCA CCTGTTGTTT        660

CAAGTGGGTT GATGTCATTG TCAAAGTCGT TGTCTTCCAA ACCAAGGTGG ACAATTTCTT        720

TCTTGTAGCG AACAAACATC TTCTTGAAGG CTTGTTCATT TTCTTCGTCA ATCTTGAACC        780

AGAGTTCTTC CATTCCTGGA AGGCTGTGAA CGTAgTCCAT GTATTTTTGA GTTGTTTCAT        840

AGTCACCTGA AACTGTTCCG TTAATTCCCT CGTCAGCGAC TAGGATACGG CCTTTAAGGn        900

CGATTGATTT ACAGAAAGCC AAGTGGTCTG CAGCAAATTG CTCTGCATTT TCAATTGGAG        960

TATAAAGGTA GTAAAGTAAG ACACGAATAT CTTTTGkCaw AAGATTTGTA TCTCTTTATC       1020

TAT                                                                    1023
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(2) INFORMATION FOR SEQ ID NO: 291:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 3831 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 291:

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ACTATGAACA AGACCCAGAA AAAGTAGCCT TATTTCTTAA GAATTTTAAT AGTTTAAAGC         60

ACCTAGCACC TGTTTAGATT GACGAAACAG GATTCGATAC TTATTTTTAT CGAGAATATG        120

GTCGCTCATT AAAAGGTCAA TTAATAAGAG GCAAAGTATC TGGAAGAAGA TATCAGAGGA        180

TTTCTTTGGT TGCAGGTCTA ACAAATGGTG AATTAATCGC TCCAATGACT TACGAAGAGA        240

CGATGACGAG CGACTTTTTT GAAGCTTGGT TTCAGAATTT TCTCTTACCA ACATTAAACA        300

CACCATCGGT TATTATTATG GATAATGTAA GATTCCATAG AATGGGGAAG CTAGAACTTT        360

TATGCGAAGA GTTTGGGCAT AAACTTTTAC CTCTTCCTCC CTACTCGCCT GAGTACAATC        420

CTATTGAGAA AACATGGGCT CATATCAAAA AGCACCTCAA AAAGGTATTA CCAAGTTGCA        480

ATACCTTTTA CGAGGCTTTT TTATCCTGCT CTTGTTTCAA TTGACTATAT TAGAGGCGAG        540

ACATTTTTCG GTTCTTTGTC AACTGTAGTG GGTTGAAGAA AGCGAAGATC TAGAAAGGAC        600

AAATTTCGTC CTTTCTTTTT TGAAGTTTTC AAAGTTCCTA AAACCAAAGG CATTGTGCTT        660

GATAAGTTTG ATGAGATTAT TGGTGGCTTC CAGTTTGGCG TTGGAATAAG GTAATTGAAG        720

GGCGTTGACG ATTTTCTCTT TATCTTTGAG GAAGGTTTTA AACAAAGTCT GAAACAGAGG        780

TGGAAAAGCA AGAGCTGATA GAGATTATAG TGGTGTTTAA AGTCTTCGGA ATAGCTCAAA        840
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1320

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AGTTTATCTA GAATTTCTTT ATTAGTCAAG TGCATACGAA AAGTAGGGCG ATAAAATCGT          900

TTATCACTCA GTTTCTGACT ATCTTGTTGA ATGAGCTTCC AGTAGCGCTT GATAGCCTTG          960

TATTCATGGG ATTTCGGATG ATGGCTTGTG TTCTGCTCTC AAGAACAGTT ATGATATTGA          1020

GTTTATCAAA GTCCTGAGCA ATAAAGCTCA TCTCCATCTC CCGATTGAAA CAGTCACTCC          1080

CCGGACTGTT TCAACsTCCT AGGACATAAT CTCAGGAAGA CGCGAAAAAT CATGCTCAAA          1140

GTGAAAATCA TTGTTCTTGC GAATGACAGT TGAAGTTGAA ATAGACAACT GATGATCAAT          1200

GTCGGTCATA GAAGTCTTTT TAATTAGCTT CTGAGCAATC TTTTGGTTGA TGATACAAGG          1260

AATTTGATGA TTCTTCTTGA CGATAGAAGT CTCAGCGAGC TCCATTTTTG AGCAATGATA          1320

GCACTTAAAA CGGCCTTTTC TAAGAAGAAT TCTAGTTTGA ATTTTTTTAT ACTAGAAAAT          1380

CAGAACCATA ATACCTATAT AAAAATATTA TAGTTCTAAT AGGATTTACC CAAAAGTTTT          1440

AAGGCGGTCT TTTTAGAACT TTAATTGTTT GAAATTTAGG TAGCAAATTT GTTTCTATTT          1500

TGTCAACTTT TCCTATTTTT ATCTTGTTGA GGCTGGTATT TTAACAATTC AGGAATTGAT          1560

AGTGAATGTG TAAAATTTTT TGTTAGAATA AGTTTATAAA AAAGAAAAGG AGTATTTGAT          1620

TATGTTACAA AAAATTTATG AGCAGATGGC TAATTTCTAT GATAGTATTG AAGAAGAGTA          1680

TGGTCCTACA TTTGGTGATA ATTTTGACTG GGAACATGTT CATTTTAAAT TTTTAATTTA          1740

TTATTTAGTG AGATATGGCA TTGGTTGTCG TAAGGATTTT ATTGTTTACC ATTATCGTGT          1800

TGCTTATCGT TTGTATCTTG AAAAATTGCT AATGAATCGG GGTTTTATTT CTTGTTGAGG          1860

TAATTTTAGT AAATTTCCGA ACTAATTTAC TCTTTTATGG AAAGATGATA GTAAATAGCT          1920

AGTAATTTTT CTAAATCATT TTTTAATAGT TGGAAATAGC AAATCTTTCT ATTGTTTCTT          1980

CTTGATAAAA AGGCGATTTT TTATTATAAT AAATTGTAAG ATATAATTGC AGGTGAGAGT          2040

CCTGCCATGT ATGTGAGAAA GGAAGAGCCT GATGGCTCAG ACAAGATTAT GACTTCAGTT          2100

GTTGTTGTAG GTACCCAATG GGGTGATGAA GGTAAAGGGA AGATTACAGA CTTCCTTTCA          2160

GCGAATGCAG AAGTGATTGC ACGTTACCAA GGTGGTGATA ATGCTGGTCA CACGATTGTG          2220

ATTGACGGTA AGAAATTTAA GTTGCACTTG ATTCCATCTG GGATTTTCTT CCCTGAAAAA          2280

ATATCTGTCA TTGGGAATGG TATGGTTGTA AATCCTAAAT CTCTTGTAAA AGAGTTGAGC          2340

TATCTTCATG AGGAAGGTGT AACAACTGAT AACTTGCGTA TTTCTGATCG TGCGCATGTT          2400

ATTTTGCCTT ATCATATCGA GTTGGATCGC TTGCAAGAAG AAGCTAAGGG CGACAATAAG          2460

ATTGGTACGA CAATTAAGGG AATTGGTCCA GCTTATATGG ACAAGGCTGC TCGTGTTGGA          2520

ATTCGTATTG CAGATCTTTT AGATAAAGAT ATTTTCCGTG AGCGTTTAGA ACGTAACCTT          2580

GCTGAAAAGA ATCGTCTTTT TGAAAAATTG TATGACAGTA AAGCGATTGT TTTCGATGAT          2640
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1321

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ATTTTTGAAG AATATTACGA ATATGGTCAA CAAATCAAGA AATACGTGAT AGATACATCT    2700

GTTATCTTGA ATGATGCGCT TGATAATGGC AAACGTGTGC TTTTTGAAGG TGCACAAGGT    2760

GTTATGCTAG ATATCGACCA AGGTACTTAT CCATTTGTTA CGTCATCAAA CCCTGTAGCT    2820

GGTGGTGTGA CAATTGGTTC TGGTGTCGGT CCAAGCAAGA TTGACAAGGT TGTAGGTGTA    2880

TGTAAAGCTT ATACGAGTCG TGTAGGAGAT GGTCCTTTCC CAACTGAGTT GTTTGATGAA    2940

GTGGGAGAAC GTATCCGTGA AGTGGGTCAT GAATATGGTA CAACAACTGG TCGTCCACGT    3000

CGTGTAGGTT GGTTTGACTC AGTTGTGATG CGTCATAGCC GTCGTGTTTC TGGTATTACT    3060

AACCTTTCTT TGAACTCTAT TGATGTTTTG AGCGGTTTGG ATACTGTGAA AATCTGTGTG    3120

GCCTATGATC TTGACGGTCA ACGTATTGAC TACTATCCAG CTAGTCTTGA ACAATTGAAA    3180

CGTTGCAAGC CTATCTATGA AGAGTTGCCA GGTTGGTCAG AAGATATTAC CGGAGTTCGC    3240

AATTTGGAAG ATCTTCCTGA GAATGCGCGT AACTATGTTC GTCGTGTGAG TGAATTGGTT    3300

GGCGTTCGTA TTTCTACTTT CTCAGTAGGT CCTGGTCGTG AACAAACAAA TATTTTAGAA    3360

AGTGTTTGGT CCTAAGAGAT TTTTAAGATT TGTTTAAGAT AGGTCGGGTA TACTATAGAC    3420

GGTTACAAGA AGACCTCCTA ACTTGTTGTA ACAAATATCC TAAACTTTTC TTTTTCATAA    3480

TAATCTCCCT ATAGAGTCAC CGCATTCGGT GGCTTTTTTT GTGTTGGGAT TCATGATATA    3540

ATAATAAAAT CGATAAGTAG GAAAAGAGAA AAGAGATGTA TTATACGCTT GAAGAAAAAG    3600

AAGTCTTTAT GAGGGAGGCT TTGAGAGAGG CTGAGATTGC TCTTGAACAC GATGAAATTC    3660

CAATTGGTTG TGTGATTGTC AAAGATGGGG AAATCATTGG TCGTGGGCAT AATGCGCGTG    3720

AGGAATTACA GCGAGCGGTT ATGCATGCGG AAATTATGGC TATAGAGGAT GCGAACTTGA    3780

GTGAGGAGAG TGCGCTTGCT GGATTGCACA CTTTTTGTGA CCATTGAACC G            3831
```

(2) INFORMATION FOR SEQ ID NO: 292:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1441 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 292:

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CCGCTGTTCC AACCGCAACA TACCATAGTC CGTACGGGAT TCGAACCCGT GTTACCGCCG    60

TGAAAAGGCG GATGACTTAA CCCCTTGACC AACGGACCTG AGTTGTTATT TTCAACTCTT    120

ACTATTATAC AGTCTTTTCA AACTTTGTCA ACTACTTTTT CTAATTTTTG TTTATTTTTT    180
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1322

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CAACTTATAG TAAAAAAAGC CAGAATTATA CTGACTCTTC TATCGCTCAT TAAACTTAGA        240

AGCACGTTCT TTTCCCCACC AATAAGGGAT TAGTTCTGCG ACTTTAACTG TTTTTCTTAT        300

ATTATAGTCC ATCATGAATT CTGCATCTTT ATTTTCAGCA TTAAGCTCTA AAAGGAATTC        360

TCTACAAGCA CCGCAAGGCA TGGCTGAACT TCCACCATAA GGTGGTTTGT CTCGAAAGGC        420

TAATACTTTC TTAACCTTAG TTTGTCCTGA AAATTGGTAC ATATTGAAGA GGGCCGCCCG        480

TTCTGCGCAG AGATGGAAAA CACCACAGGT TCCCTCCATA CAGAATCCTG TAAATATTTG        540

TCCATCTCCT GCTTCTACTG CAGCTACAAC ATGATTGGCA TAAACAAAGT CTGATACTTC        600

ATGTGGATTG TATAGTTTCT GTGCTTCTTC GTACATCTTT TCCCAGATGT CCATTATTGT        660

ATCCTCTTTA TTTAGAGATT TCTTTTAGCA TGTTTTCGAT ATGCTGAATT GATTTTTCAC        720

GTCCAAGCAA GAAAATTGTA TCTGGTAATT CTGGCCCATG CATTTCGCCT GAAACTGCGA        780

TACGAATAGG CATGAAAAGA TTTTTCCCTT TAATACCTGT TTCTTTTTGG ACTGCTTTAA        840

TTTGTGGGAA GATATTTTCT GTCACAAATT CATCATCTGT CATCGCTTCA AGTTTTGCTT        900

TGAATGCTTC AAGAACTGTT GGAACTGTTT CACCCGTCAT GACTTCGCGC TCTGCTTCTG        960

TCAATTCTGG GAAATCTGAG AAGAAAGAT CTGTCAATGG GATAATCTCA TCTACTGATT       1020

TCATTTGTGG TTTATAGAGC TCAACTAATT TTTCAGCCTT GTCAGTCAAA CGGCCTGCTT       1080

CCTCTAAGAA TGGTTTTGCC ATTTCAAAGA TGGTTTCAAG GTCTGCATTC TTGATATAAT       1140

CATTGCTCAT CCAGTCTAGT TTTTTCTGAT CAAAGGCTGC TGGTGACTTG CTGAGGCGGT       1200

TTTCATCAAA AAGTTTAATG AATTCTTCAC GAGAGAAAAT CTCATCCCCA CCACCTGGGT       1260

TCCAACCAAG AAGAGCAATA AAGTTAAAGA CTGCTTCTGG AAGGTAACCT TTCTTTCGGT       1320

AATCTTCGAT AAATTGAAGT GTATTAGTAT CACGTTTAGA TAACTTCTTA CCAGTTTCAG       1380

AGTTGATAAT CAAGTGTCAT GTGACCGAAC TCTGGAGCTT CCTCAACCTA AGAGCGGGTA       1440

T                                                                      1441
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(2) INFORMATION FOR SEQ ID NO: 293:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 4398 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 293:

```
CGGCTTATGT AGTGGCAATC TTTCTACGTA AGCGAAACGA GGGGAGATTA GAGGCGCTAG         60

AAGAAAAAAA AGAAGAACTA TACAATCTTC CAGTAAATGA TGAAGTAGAA GCTGTAAAAA        120
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1323

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ATATGCACTT GATTGGACAA AGTCAAGTGG CTTTCCGTGA ATGGAATCAA AAATGGGTCG        180

ATTTATCTCT CAACTCTTTT GCCGATATTG AAAATAATCT CTTTGAAGCA GAAGGCTATA        240

ACCATTCATT TCGTTTTCTC AAGGCCAGTC ATCAAATTGA CCAAATTGAG AGTCAAATTA        300

CTTTGATTGA AGAAGATATT GCGGCAATTC GCAATGCTTT GGCAGACTTA GAGAAGCAAG        360

AATCTAAAAA TAGTGGTCGT GTTCTTCATG CTTTGGATTT ATTTGAGGAA CTTCAGCATA        420

GAGTTGCTGA AAATTCAGAA CAGTATGGTC AAGCCTTGGA TGAAATTGAA AAACAATTAG        480

AAAATATCCA ATCTGAATTT TCACAATTTG TAACCTTGAA TTCATCGGGT GACCCTGTGG        540

AAGCCGCAGT GATTTTGGAT AATACAGAAA ATCACATTTT GGCCTTAAGT CATATTGTGG        600

ATCGTGTTCC AGCCTTGGTT ACGACGCTTT CTACAGAATT GCCAGATCAA TTACAGGATT        660

TGGAAGCCGG TTATCGTAAA CTAATTGATG CTAATTATCA TTTTGTTGAA ACGGATATTG        720

AAGCGCGTTT CCACTTGCTT TATGAAGCAT TCAAGAAAAA CCAAGAGAAT ATTCGTCAGT        780

TGGAATTGGA TAATGCCGAA TATGAGAATG GACAGGCACA AGAGGAAATC AATGCCTTGT        840

ATGATATTTT TACTCGAGAA ATTGCTGCTC AGAAAGTAGT GGAAAATCTA CTTGCAACTC        900

TTCCAACTTA TCTTCAACAT ATGAAAGAGA ATAATACTTT ATTGGGAGAA GATATTGCAC        960

GTTTGAACAA GACCTATTTA CTTCCTGAGA CAGCTGCAAG CCATGTTCGT CGTATTCAGA       1020

CAGAATTAGA GAGTTTTGAG GCAGCTATTG TTGAGGTAAC TTCAAATCAA GAAGAACCAA       1080

CCCAAGCTTA TTCAGTTCTT GAAGAAAATC TTGAGGATTT ACAAACTCAA CTAAAAGATA       1140

TTGAAGATGA GCAAATTTCA GTTAGTGAGC GCCTGACACA AATTGAGAAA GATGATATTA       1200

ATGCACGTCA AAAGGCCAAT GTTTATGTCA ATCGTCTCCA TACTATCAAG CGATACATGG       1260

AAAAACGCAA TCTGCCAGGT ATTCCACAAA CTTTCTTGAA GTTATTCTTT ACGGCAAGCA       1320

ATAATACCGA GGATTTAATG GTTGAGTTAG AACAAAAAAT GATTAACATT GAATCTGTTA       1380

CCCGAGTTCT TGAAATTGCA ACGAATGATA TGGAAGCTTT AGAAACGGAA ACTTATAATA       1440

TTGTACAATA TGCAACTTTG ACAGAGCAAC TCTTGCAATA TTCTAACCGC TATCGCTCAT       1500

TTGATGAACG CATTCAAGAA GCATTTAACG AaGCTTTAGA TATTTTTGAA AAAGAATTTG       1560

ATTATCACGC TTCATTTGAC AAGATTTCTC AAGCATTGGA AGTGGCAGAG CCTGGTGTAA       1620

CCAATCGCTT TGTTACCTCA TATGAGAAAA CACGTGAAAC GATTCGTTTT TAATAAAAGA       1680

AAAGATTTT ATTGTGTGAG GAGCAGAATC AAATCTTTTT CTATAGTTGT GGGGAGATTT       1740

ACTTCATTTT CTCCTGAGAT TGAGTTTTTG CCCAGCCGAT TTATCCACTA CCTCAAAACA       1800

GTGTTTTATA CTCTTCGAAA ATCTTTTCAA ATCACGTCAG CGTCGCCTTA CCGTACTCAA       1860
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1324

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GTACAGCCTG AGGCTAGCTT CTTAGTTTGC TTTTTGATTT TCATTTAGTA TTAAAGTGAT     1920

TTCGCCAGTC TTATCTGCAG CTTCAAATCT GTACTTTGAG TAACTTGGTA ACCGTCCAAT     1980

AACGAAGTCT ATTGAAAAAT CTCCAGACTA GAGAACTCAC GGATAGTTCC TAATCTGGAG     2040

ATTTCTTATT TGCACTTTTC TTGTACAACT TTAGTCCACG GTAAATAGAC CTCTAAAACC     2100

TCTTTGTTTA CGAGAGTTTC CTCGTTTGGA AGACATTCTA GAAGATAGGA TAGATATTTC     2160

TCGCTATTTA TACTAGACTA AAATCAAAAA GCATTATATA ATAGTGATAT GAAATCAACT     2220

AAAGAAGAAA TCCAAACCAT CAAAACACTT TTAAAAGACT CTCGTACAGC TAAATATCAT     2280

AAACGCCTTC AAATCGTTCT ATAGTAAAAT GAAATAAGAA CAGTACAAAT CGATCAGGAC     2340

AGTCAAATTG ATTTCTAACA ATGTTTTAGA AGTAGAGGTG TACTATTCTA GTTTCAATCT     2400

ATTATATTTC GTCTGATGGG CAAATCTTAT AAAGAGATTA TAGAACTTTT ATAGTAGATT     2460

GAAATAAGAT GTGAACAACT CTATCAGGAA AGTCAAATTA ATTTATAGAA ATATTTTAGC     2520

AGCCAAGGTG TACTGTTATA GATTCAATAC ACTATAGACT GTAATCAAAC AACGATTTGG     2580

CGAAATGTAA AAAAATATGA GGAGTTCGGA CTCGACTCTC TCCTTCAAGA AACACGTGGT     2640

GGTCGTAACC ATGCATATAT GACAGTTGAG GAAAAGAAAG TCTTTCTTGC CCGCCATTTG     2700

AAGGCTGCAG AGGCAGGAGA ATTTGTTACA ATTGATGCCT TATTTCAGGC TTATAAAAAG     2760

GAGTTAGGTC GTTCCTACAC ACGTGATGCC TTCTATCAAC TGTTGAAGTG CCATGGTTGG     2820

CGAAATATTA TGCCACCTCC AGAACATCCT AAGAAAGCAG ACGCTCAAAC CATTGTCGCG     2880

TCTAAAAATA AAATCTCAAT TCAAGAAGAA AAGAAAGCGC TTTAAAACCA GTAGACGTTT     2940

TCGTAAGGTT CGCTTGATGT ACCAAGATGA GGCTGGTTTC GGTAGAATCA GTAAACTGGG     3000

ATCTTGTTGG GCTCCAATAG GAGTAGGTCC ACATATCCAT AGTCACTATA TACGAGAATT     3060

TCGCTATTGT TATGGAGCTG TTGATGCCCA TACAGGCGAA TCATTTTTCT TAATAGCTGG     3120

TAGATGTAAT ACTGAGTGGA TGAACGCCTT TTTAGAAGAG CTTTCACAAG CTTATCCAGA     3180

TGATTATCTT TTACTCGTTA TGGACAATGC TATATGGCAT AAATCAAGTA CCTTAAAGAT     3240

TCCGACTAAT ATTGGTTTTA CCTTTATTCC TCCATACACA CCAGAGATGA ACCCCATTGA     3300

ACAAGTGTGG AAAGAGATTC GTAAACGTGG ATTTAAGAAT AAAGCCTTTC AAACTTTGGA     3360

AGATGTCATG AATCAACTCC AAGATGTTAT ACAAGGATTG GAGAAGGAGG TGATAAAGTC     3420

CATCGTTAAT CGGAGATGGA CTAGAATGCT TTTTGAAAAC AGATGAGTAT AAAAAGAAAG     3480

TCCTCATTTC AATAGAAATC ACGACTTTCT GATGGATTTA TAGTAAAATG AAATAAGAAC     3540

AGGACAAATC GATCAGGACA GTCAAATCGA TTTCTAACAA TGTTTTAGAA GCAGAGGTGT     3600

ACTATTCTAG TTTCAATCTA CTATATTTTT GGAGTGATAG AAAAGCCCTT CATAAGCTAG     3660
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1325

TCTACTTGTT CAGGTGCGAG AGCTTTGACA TCTTTTTCTG TACTTAGCCA AGTCAGTTTT   3720

CCGTTCTCAA AGCGTTTATA TAGTAGCCAA AATCCTTGAC CATCCCAGTA AAGGGCTTTA   3780

AAGCGGTCTT TACGTCCACC ACAAAAGAGA AAGACTTGAC CGGAGAAAGA ATCCAATTCA   3840

AAGTGGGTTT TAACTACATA GGCTAATGAG TCTATTCCCT GCCTCATATC TGTCTTGCCA   3900

CAAACAAGGT GAACTTGACC TAAATCACTT AGTTGAATTA TCATAGTACA ATACCTTTCC   3960

TCCGATAATT ATTTTTTATC TAGTATACTG GAAGTTGGGG AATTAGGATA GATACCTTGT   4020

TATGACGCGC TTACGTAACT TGTAACTAGC TGCCTAGTTT GATCTTTGCT TCTTCATTGA   4080

TTAGCAGTAG ATTTCAAAAT GATAAAAACG CATAGTATCA GGTATTGAAA TGTACTGCCC   4140

CAAAAGTTAG ACAGAAAAAA TCTAACTTTT GGGGTGTTTT TGTTATGAAA TTAAGTTATG   4200

ATGATAAAGT TCAGATCTAT GAACTTAGAA AACAAGGATA TAGCTTAGAG AAGCTTTCAA   4260

ATAAATTTGG GATAAATAAT TCTAATCTTA GGTATATGAT TAAATTGATT GATCGTTACG   4320

GAATAGAGTT CGTCAAAAAA GGAAAAAATC GTTACTATTT TCCTGATTTA AAACAAGAAA   4380

TGATTAATAA AGTCTTAC   4398

(2) INFORMATION FOR SEQ ID NO: 294:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 718 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 294:

AGATTTTTAG ACTTTGTCTT TAATCGTTTC TTTTTAGGGA TGATTGCGAC ACCTTCTTTT   60

GGCTATTAAC TTTAGCAGGA GGGATTATCC TTGGTCTAGC GCCGGCTAGT GCCACCTTGA   120

TGAGCTTATA TGCAGAACAT GGTTATAGCT TTCGGGAATA CAGTTTGAAG GAGGCTTGGT   180

CTCTTTACAA GCAAAATTTT GTCTCAAGCA ACCTGATTTT CTATAGCTTT TTAGGTGTGG   240

GTCTAGTTTT GACCTATGGT TTGTATCTCT TGGTGCAATT GCCTCATCAG ACCATTGTTC   300

ATTTGATTGC GACCCTTTTG AATGTCCTAG TAGTTGCCCT GATCTTTTTG GCTTATACAG   360

TATCTTTAAA ATTACAAGTT TATTTTGCCT TGTCCTATCG AAATAGTCTC AAATTATCCT   420

TGATTGGCAT CTTTATGAGT CTAGCAGCTG TGGCTAAGGT TCTCCTTGGG ACTGTGCTAC   480

TTGTAGCAAT TGGTTATTAT ATGCCTGCCC TGCTATTTTT TGTAGGAATT GGGATGTGGC   540

ATTTCTTTAT CAGTGATATG TTGGAACCTG TCTATGAAAT CATCCATGAA AAATTGGCGT   600

1326

CAAAATAGAA TGAAGCAGTT TTGGCTACAT ACGCTTCTAA GAACCTATAG TTCAGTGATG   660

ATCATTATCA TTGCGAGTTT TGCAATCTTA CTCTCTTACG CTGTCTGGGA TTCACGTG   718

(2) INFORMATION FOR SEQ ID NO: 295:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 718 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 295:

TCGGTACCAA AATTCTGGAT TTATACTAGC AAAGATCCAA GAGCAAATTA TTTAACAGAT   60

TTAGGTCTAG TTTTCCCTGA ATCATTAAAA GAATTTGAGA GTGAAGATAG TTTTGCAAAG   120

GAAATTTCTG CAGAAGAAGC AAATAAGATA AATGATGCTG ATGTAATCAT AACTTATGGT   180

GATGATAAAA CTCTTGAAGC TTTACAAAAA GATCCTCTTT TAGGTAAAAT AAATGCAATT   240

AAAAATGGTG CCGTTGCTGT AATTCCAGAT AATACACCGT TAGCAGCCTC ATGCACTCCA   300

ACACCACTTT CAATAAACTA TACTATTGAA GAATACCTAA ATCTTTTAGG AAATGCATGC   360

AAAAATGCGA AATAAAAAAC AAATAAACCT AGGCATAATT TTTATAATCT GCCTAGGTCT   420

TCTTATTACA ATATTTTTGT CATTAAAGCT TGGAACAAAA GAAATTAATA TCAGAGATTT   480

TTTAGCAGCT TTTGGAATGG GTAATACAAA TGATGATTTT ATTAAATCAA TTATATATAA   540

rAGAATACCT AGAACTATTT TTGCAATTTT AGCAGGTTCT AGTCTTGCCA TAAGCGGTGT   600

ATTGATGCAA TCAGTTACTA GAAACCCAAT AGCTGATCCA GGTATACTCG GTATAAACAC   660

AGGAGCAAGT CTTAGTGTAG TAATTGGTCC TTCtTTTTAG GGAATTCATC AAGCATAA   718

(2) INFORMATION FOR SEQ ID NO: 296:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 1436 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 296:

GAACTAATCA TTTTTACAGG ATGAGATTTA CAGCAGAGAG TTTGAAGGCT TTATCAAAGG   60

TTTTTCTTGG CATAATGACT TTTCCTCGTT TCCACTTAAT TTTGTGTCTA CTTTATTATA   120

CCAAGTCCAC sCTTAAGTTA GATAATAAAT CTAACTTAAG GAAGCTAGAA GGATGAGAAT   180

CCAGGTGGTC AAGAGTCCCA AACTTAAGCT GATGGGGACA CCCAGAATAA TTTGCTTTTT   240

1327

```
GAAGGCAAGG CCACGTTCCT CTATATTGGG AAGTGAGAGT TGAATGAGAG AACCAGCTGA      300

TGAAAAGGGT GAGATATTAG TAGATAGAGC GCCAATAACG GTGGCTGTTG TGAGTAAGTG      360

AATATCAATC TGAGGATTTT GAGCACTGAT GATAGCAATG ATGGGAAAGA GGGCTGGAGC      420

TACAACGGAT AGGGTGGAAC TAAAGAGTGA CATCACTCCG GCTATCACAC AAAAGAACAG      480

AGGTAACCAG AAATGAGGAA TGGTTGTTGT CATGAGGTGC CCTATCAGTG TGACTAAACC      540

TGACTTGACC GCTAGAGACA TTAGTAAGCT CATGCCGCAG AGCATGATAA TTGTAGCCCA      600

GGGAACCTTA GCTAAAATGG CTTCTTGCTT CCCTAATTTG AGCCTTAAGG CGAGGCAGAC      660

CATGAGTATT GAGACAAAGC CAATATCAAA TGTTTTTTGA TAAGTAGCTA TCCAGGCGAT      720

GTTTGGGAAA ATGAGATGCA ACAAGGGAAA AAGCCAAACC AAAACCATGC TGCTGATCAT      780

GAGCAAGGTG GTTTGTCTTT GAACCTTGCT GAGGAGTGGT GGTTGGTCAA TAGTCAAGGA      840

TGAGTTTGTT CTTCCCTTAC TATAGTGACT GTAACAGGAT AATAAAAGCA AGACGATGAG      900

TGGGTAGATA ATGCTGACGA TAAAGATATG ATTGCCAAGT GAAAAAGCTT GCTCTTCCCA      960

TCCCATTTGC TTAAACAGGC CTTGAAAGAC AATGCCTGAG CTACTGGTTA TCAAATTAGC     1020

CCCTCCTGAA GCTCCCCAAT TGACGGCTTG AGCTCCAATC AAAGGGTGTT TGTCCGCTTT     1080

TTGACAGAGG GTAATCGCTA GAGGACAGCA AACGGCCATA GTAGTGAAAA ATCCAGCACC     1140

TAAAGCAGAC AAAAGGGTTG CCATCAGGTA TAAAATCATG TAGAGGGCGT TAGGGTGGGT     1200

GCGTGTGCGG TAGAGAATGT GTTGAGCCAA AACATCAAGA GTACCGTTAG TTGTTGCAAC     1260

GTTATAAAAG AGAGAGACGC TAAAAATGGT AAAAAAGAGT GAGGTTGGCC AAAAATGAAG     1320

AAGTTCTTTG GGGCTTAATC CCATGAGAGT GGTTGCGATG AGGTAAGAAA AAGCAATAGC     1380

CAGCAGGCCA ATATTGATTT TGGTGCGGTA ACCAATTCCA ATGGCTAGAG CAATGG        1436
```

(2) INFORMATION FOR SEQ ID NO: 297:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1696 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 297:

```
CCATTTGGGA AAGAACGTAA GAGTTTGCAG GGTGAGATTC CAGAAGAATT TTCAATGTCA       60

GCCGTTGACA TGTCTATGAT TGACCACATT CCAGATATGA TTGAAAATGG TGTGGACAGT      120

CTAAAAATCG AAGGACGTAT GAAGTCTATT CACTACGTAT CAACAGTAAC CAACTGCTAC      180
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                                          1328
AAGGCGGCTG TGGATGCCTA TCTTGAAAGT CCTGAAAAGT TTGAAGCTAT CAAACAAGAC      240

TTGGTGGACG AGATGTGGAA GGTTGCCCAA CGTGAACTGG CTACAGGATT TTACTATGGT      300

ACACCATCTG AAAATGAGCA GTTGTTTGGT GCTCGCCGTA AAATTCCTGA GTACAAGTTT      360

GTCGCTGAAG TGGTTTCTTA TGATGATGCG GCACAAACAG CAACAATTCG TCAACGAAAT      420

GTCATTAACG AAGGGGACCA AGTTGAGTTT TATGGTCCAG GTTTCCGTCA TTTTGAAACC      480

TATATTGAAG ATTTGCATGA TGCCAAAGGC AATAAAATCG ACCGCGCTCC AAATCCAATG      540

GAACTATTGA CTATTAAGGT GCCTCAACCC GTTCAATCAG GAGATATGGT TCGTGCATTA      600

AAAGAAGGAC TCATCAATCT TTATAAGGAA GATGGAACCA GCGTCACAGT TCGAGCTTAA      660

GAAAGGAAAA GGAAATGATA GAGGCACAGG GTTTCTTAGT GGATAAGCAA ACAAGATGCA      720

TTCATTACCA TAGCAAGCTG GATATTATTG CTTTACAATG CTATGATTGT AAAAAGTATT      780

ATGCTTGTTA TCGGTGTCAT GATTCATTAG AACATCACCC TTTTGAGCCG TATCCCTTAT      840

CTTTGATACA GGATAAGCCT ATTTTATGTG GTGTTTGTCT AAAACTACTA ACATATAAGC      900

AATATAAAGA AAGCTTAAGT TGCCCCTTTT GTTTTTCTCG CTTTAATCCA GGTTGCCAAA      960

ATCATAAGGA ACGCTATTTT AAATAGCAAA TCATCTAGTT TTGAAGTAGG AGAAAACTCA     1020

ATTTCAAGAG AAAATGAAGT AAATCTTCCC ACAATAAAAC GCATAATATC AAGATTGTTC     1080

AATACCTGAT ACTATGCGTT TTTAAGATTT TAAAGACTTT TTTCCTTTAT CTGGTATTTT     1140

GACTACTTGT TAAAACTGGG TTAATTTTCG ACTGTTTAAT AGTTATTATG CAAAGTCTAA     1200

AAGGTTAGAA TTGTCAAAAC AATCCGTCTA GAGTATGCGT GATGCCAACC GTGGTGGATG     1260

TTCTCAGTCA TGCCGTTGGA AGTACGACCT TTACGATATG CCATTTGGGA AAGAACGTAA     1320

GAGTTTGCAG GGTGAGATTC CAGAAGAATT TTCAATGTCA GCCGTTGATA TGTCTATGAT     1380

TGACCATATC TCAGATATGA TTGAAAATGG TGTGGACAGT CTAAAAATCG AAGGACGTAT     1440

GGAGTCTATT CACTATGTAT CAACAGTAAC CAACTGCTAC AAGGCGGCTG TGGATGCCTA     1500

TCTTGAAAGT CCTGAAAAGT TTGAAGCTAT CAAACAAGAC TTGGTGGACG AGATGTGGAA     1560

GGTTGCCCAA CGTGAACTGG CTACAGGATT TTACTATGGT ACACCATCTG AAAATGAGCA     1620

GTTGTTTGGT GCTCGTCGTA AAATCCCTGA GTACAAGTTT GTCGCTGAAG TGGTTTCTTA     1680

TGATGATGCG GCGGTA                                                     1696
```

(2) INFORMATION FOR SEQ ID NO: 298:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1022 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

1329

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 298:

```
CCGAGTTTAT TATGGTTTCT TCGGAATTTA TCTCAAAGAT TGAATTTGCT TGCAATAAGA        60

AAGAAAGTCT TTATAGTCAA AGCAAATTTA AGTATGCGAT TCGTTCGATG TTCGCAGGTG       120

CATTTTTAAC CTTCAGTACT GCTGCAGGTG CAGTTGGGGC TGACTTGATT AATAAAAATTG      180

CACCAGGTAG TGGACGCTTC CTCTTTCCAT TCGTTTTTGC TTGGGGCTTG GCCTACATTG       240

TTTTTTTGAA TGCCGAGTTG GTCACTTCAA ACATGATGTT CTTGACTGCT GGTAGTTTCT       300

TAAAAAAAAT CTCTTGGAGA AAAACAGCTG AGATTTTACT ATACTGTACC TTGTTCAACC       360

TTATCGGAGC CTTGATAGCA GGGTGGGGCT TTGCTCATTC GGCAGCCTAT GCGAATCTGA       420

CACACGATAG TTTCATCTCA GGTGTTGTTG AGATGAAGTT AGGCCGCTCA AATGAATTGG       480

TCTTGCTTGA GGCGATTTTG GCAAATATTT TTGTAAATAT TGCGATTCTG TCATTTATTT       540

TGGTCAAAGA TGGTGGTGCC AAACTTTGGC TTGTGTTGTC AGCTATTTAC ATGTTTGTAT       600

TCTTAACAAA CGAGCACATT GCGGCGAACT TTGCTTCTTT CGCGATTGTG AAATTCAGTG       660

TTGCTGCGGA TTCAATTGCC AACTTCGGTG TTGGAAATAT GCTTCGCCAC TGGGGTGTGA       720

CTTTCATCGG AAACTTTATC GGAGGAGGCC TCTTGATGGG TCTTCCATAT GCCTTCCTCA       780

ATAAAAACGA AGATACTTAT GTAGATTAAG AAAATGAGCA CGATTGAGTC GTGCTTTTTT       840

CATTTTCAAA ATAAGGTAAT AGCTATTTCT TATATCAAAA TATAGAAAAC TGATATTTGT       900

ArACTATAAC TCAAGGTGCT ACAATATCCT TAATAAAATA ATATGGAGGT CACCTTATGA       960

CTTGTGATTT TAAATnTGAA ACTCTACAAC TACATGCTGG TCAAGTTGTG GCTCCAGCTA      1020

CT                                                                    1022
```

(2) INFORMATION FOR SEQ ID NO: 299:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 663 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 299:

```
CCTTAAGTAA TCTCTGATAA TATTTTCTTT ATTAGCATAG GGGAATATCG ATATAATGGC        60

TTCATTATGA GTGGCAGGAA TATCCAATAT GGCAACTTTT CCAATAGATA ATTTAAAACT       120

CATTAATAAA GTTCCTTTAG GTGAAATGTC TATTTTCTTT GATTTTAATG CTAATTTAGA       180
```

1330

AATAGATTCT CTCGCATTAG TTACATAACC AGATATAGGC ATATCTGATA TAGATACCCA   240

AGGTATTTCA GTTCCCCAAA AAGTAGCTTC ACTGCGTGGA GGAGTTTTTC CTATTCTGAA   300

GTTAACTAGG CTAGCAAATT TAATATATCT CCATGCTTCT GGGATTTCAT ATATAGGATA   360

AGAGGTTGTT TCGTCTTTGT TCCCATAATA AGAGTTATCA TCTCCTTGGG AAACAATAGA   420

AATGTCCAAA TCTTTCTTTT TAATCTTGCC TTCTTCAAAG AGTTTTTGTT TTTCTGCTCG   480

TATTTTTTCA AGTAAAACTT CGACTGATTC ATCATTTGGG TCTTGTTCAA CTAATTTTCC   540

TTGCATAGCA TATTGAAGAA TAGATTTTTT TAGTTTATCT GGAAATTCTT TATCTAGCTG   600

TTCTAGTCTA TTATAACTTT CAGCATATTC ATCTACTTTT TCTAAAGCTG ATTCGATTGC   660

TTC
                                                                         663

(2) INFORMATION FOR SEQ ID NO: 300:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 881 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 300:

CGTCGCTGAA CATGTCAACA GCAAATTAAA CTAAACAAAC TAAAATTATG TGATACTTCA   60

CATAATTTTC TTTAGAAAAT ATTATCAGAA GAAAGTTGAG AAAAATGGCA GAAAAAACAT   120

ATCCTATGAC CCTTGAGGAA AAGGAAAAAC TTGAAAAAGA ATTAGAAGAA TTGAAATTGG   180

TTCGTCGACC AGAAGTGGTA GAACGCATTA AGATTGCCCG TTCATACGGT GACCTTTCAG   240

AAAACAGTGA GTACGAAGCA GCTAAGGATG AACAAGCCTT TGTCGAAGGA CAAATCTCTA   300

GCTTAGAAAC AAAAATCCGC TATGCTGAAA TCGTCAATAG CGACGCAGTT GCCCAGGACG   360

AAGTAGCGAT TGGTAAAACA GTCACCATCC AAGAAATTGG TGAGGACGAA GAAGAAGTTT   420

ATATTATCGT AGGTTCAGCT GGTGCAGATG CCTTTGTAGG TAAGGTTTCA AATGAAAGCC   480

CAATTGGGCA GGCCTTGATT GGCAAGAAAA CAGGTGATAC AGCAACCATT GAAACGCCTG   540

TTGGTAGCTA TGATGTAAAA ATCTTGAAGG TTGAAAAAAC AGCCTAAAAA CAGAAAAAGG   600

AGTGGGGAGG CGATGTGCTT CACTCACTCC TTTTTCCATT TTGCTACTCT TCGAAAATCT   660

CTTCAAACCA CGTCAGCGTC GCCTTGCCGT ATGTATGGTT ACTGACTTTG TCAGTTTCAT   720

CTACAACCTC AAAACAGTGT TTTGAGCTAA CTTCGTCAGT TTCATCTACA ACCTCAAAAC   780

TATGTTTTGA GCTGACTTCG TCAGTTTCAT CTACAACCTC AAAACCATGT TTTGAGCCGA   840

CTTCGTCAGT TTCATCTACA ACCTCAAAAC TATGTTTTGA G   881

1331

(2) INFORMATION FOR SEQ ID NO: 301:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 949 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 301:

```
CCTTTTTTAA TACAAGTTAT TTTGATTTAA CCGGCTTGTC TTGAGCTGTC TGCAAAGCTG       60

TGGCAATCGT ATCTGCATAC AATTTTGCTC CTGCTTCGAT AGTGCTACTC TCACTCCCGA      120

AATGAACCTG GTCTGTTCCA GCCCAAATTT CTGGATGCTC TTTCGCAACT TGATTCCAAT      180

CTGCTATCGT AATGTAAGGT GTCTTCTCTG CCAATTCTCT CATATAGGCA GCAGCCTTCT      240

CAACGATGGC ATAGGTCTCT TTTGTCTTAT CTCCCTCATA AGGAGTCACC AAAATCATAT      300

GGTGTCCCTT AGGAAGATTT TTCACGATAC TGTCCCAGTC ATCCTTGTAA TTCTCAGGAT      360

TATTTACCCC AGTCGCAATG ACCACCGTCT TAGGTAAAAA TTTATTCTGG CTATTATTTA      420

GCATGATTTC ATTTGCGGTC TTGGTTGTTA CGCTGACCTG CGCGTTAATC TGTGCTCCAG      480

GAAGAGCTGT CTGTAGTGCT GTATTTGCCC TTAAAGCCAC TGAGTCACCA ATTAACATAG      540

TGCCATCAGC AATTCCCAAA CTGTTTGCAT CTGCCCGTTC TGCCATCACC TTGGTCTGGC      600

CAATATTTGT TGCAGCTTGC TTCAAGCCAT TGACAGTCAA GTCTGTCTCA AACGCTCCCA      660

CTTGTGGTGC CAACAAGGTC ACCGTGCAGA CAATGATGGT CAAGATTCCT GTACCTGCTG      720

CAAGAATTGC GTGAATATAA GGCAGGGGAC GAAsGGTTTG GACAATAGGT GTGTTCTTGC      780

CTGCAATCCA AGGTTCCAAT ACATAAAATG ACAGACTGGC AAAGCCATAA GAACAAATCA      840

GAGTCAGTAA TACAGCAAGA AGATTTGATG TCAACTGTGA GAAAATGATA TAGAAAGGCC      900

AATGGAAAAG ATAAACCGCA TAGCTAGTAT CCGCTAAAAA GCTGATAAT               949
```

(2) INFORMATION FOR SEQ ID NO: 302:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 622 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 302:

```
AAGATATATT TTTTACACAG AAGTATGCAA AAGTAAAGAG TGCAAAAAAT GGAATTAAAG       60
```

1332

CGAAAATAAA AGCCGTGTAC AGGCGACCAA ACCAACGTAC ACGGCTAAGG AAAAATAACA   120

AAACTCAAGC AAAGGCAAGG CGCGTGGTTT TGTTAGGTAT TTAGCAAGGG GACAAACCCC   180

TTTGTAAATA ATCTCCTCTT ATTTTATCAA AATTAGAGGA AAATGACAAC TTAATTTATA   240

AAAAGGAAAA ATGGAGGATA TAAATGGAAA TTCTGTCTAA AGAAATACAG TTACAGGGCT   300

TACAACTTCT TAAACAGACT CTTGAAACTT TAGTTGAGCT AGAAAAACAA CGATCTAGTA   360

AGTTAGATTT AATTTCTCGT AAAGAATTAA TGGATCTGCT AGGTATAAGT GCTACAACCC   420

TTGATAACTG GGAGGATCTT GGTCTTAAAC GATATCGAC TCCGATGGAT GGAGCTAAGA   480

AAGTATTCTA TCGTCCGTCA GATGTGTATT TATTTTTAGC AATAAAATAG GAGTTATGAA   540

ATGAAAATTG TTACTTTCAA ACCAACTAAA CAAATAGACG ATGGGTTTTA ACTGCCAGGT   600

ATTGACATTC TATTTGTCTC AG   622

(2) INFORMATION FOR SEQ ID NO: 303:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1929 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 303:

CGCTAACTTG CAAACAAAAG AAGAACCCAA ACTCCACAAA TCCTTTACGC AGAAACTCAA   60

TCTCATCTAC TTACCTTGCT GACTTGGTAG AGTATGTTGC AGACAAAGAC TTCTCAGTAA   120

ACGTAATTTC TAAATCAGGT ACAACAACTG AACCAGCGAT TGCTTTCCGT GTCTTTAAAG   180

AACTCTTGGT TAAGAAATAC GGTCAAGAAG AAGCTAACAA ACGTATCTAT GCAACAACTG   240

ACCGCCAAAA GGGTGCTGTT AAGGTTGAAG CAGACGCTAA CGGTTGGGGA ACATTTGTTG   300

TTCCAGATGA TATCGGTGGA CGCTTCTCAG TATTGACAGC CGTTGGTTTG CTTTCAATCG   360

CAGCATCAGG AGCTGACATA AAAGCTCTTA TGGAAGGTGC GAATGCAGCT CGCAAAGACT   420

ACACTTCAGA CAAAATCTCT GAAAACGAAG CTTACCAATA CGCAGCTGTT CGTAACATCC   480

TTTATCGTAA AGGCTATGCA ACTGAGATCT TGGTAAACTA TGAGCCATCA CTTCAATACT   540

TCTCAGAATG GTGGAAACAA TTGGCTGGTG AATCAGAAGG AAAAGACCAA AAAGGTATCT   600

ACCCAACTTC AGCCAACTTC TCAACTGACT TGCACTCACT TGGTCAATTT ATCCAAGAAG   660

GAACTCGTAT CATGTTTGAA ACAGTTGTCC GTGTTGACAA ACCTCGTAAA AACGTGCTTA   720

TTCCTACTTT GGAAGAAGAC CTTGACGGAC TTGGTTACCT TCAAGGAAAA GACGTTGACT   780

TTGTAAACAA AAAAGCAACT GACGGTGTTC TTCTTGCCCA CACAGATGGT GATGTACCAA   840

1333

```
ACATGTATGT GACTCTTCCA GAGCAAGACG CTTTCACTCT TGGTTACACT ATCTACTTCT        900

TCGAATTGGC AATTGCCCTT TCAGGTTACT TGAATGCTAT CAACCCATTT GACCAACCAG        960

GTGTTGAAGC TTATAAACGT AACATGTTTG CCCTTCTTGG AAAACCAGGA TTTGAAGAAT       1020

TGAGCAAAGA ACTTAACGCA CGTCTATAAT AGAAGAAAAG AGTGGTTTGC CCACTCTTTT       1080

TACTCTCTTT ATCCATAGAA ATTGGACTCA GCCAAGACTT GTGATATAAT ATAGAAAGCA       1140

AAAAGGCAGA CGCCTAGATA ATAGGAGAAA CTATGTCAAA AGATATCCGC GTACGTTACG       1200

CACCAAGTCC AACAGGACTA CTACACATCG GAAATGCTCG TACAGCATTG TTTAATTACT       1260

TGTATGCGCG CCATCATGGT GGAACATTTC TCATCCGTAT CGAAGATACT GACCGTAAAC       1320

GCCATGTCGA GGATGGTGAA CGTTCACAAC TTGAAAACCT TCGCTGGTTA GGCATGGATT       1380

GGGATGAAAG TCCAGAATCA CATGAGAATT ATCGCCAGTC TGAGCGTTTG GACTTGTATC       1440

AAAAATATAT TGACCAACTA TTAGCTGAAG GAAAAGCCTA TAAATCTTAC GTTACAGAAG       1500

AAGAGTTGGC AGCTGAACGC GAACGCCAAG AAGTAGCTGG CGAAACACCA CGCTACATCA       1560

ATGAATACCT TGGTATGAGT GAAGAAGAAA AAGCAGCTTA CATCGCAGAA CGTGAAGCAG       1620

CAGGGATCAT CCCAACTGTT CGTTTGGCTG TCAATGAGTC AGGTATCTAC AAGTGGCATG       1680

ATATGGTCAA AGGCGATATC GAATTTGAAG GTGGCAATAT CGGTGGTGAC TGGGTTATCC       1740

AAAAGAAAGA CGGTTACCCA ACTTACAACT TTGCCGTTGT TATCGATGAC CACGATATGC       1800

AAATCTCTCA TGTTATCCGT GGAGATGACC ATATTGCTAA TACACCAAAA CAGCTTATGG       1860

TCTATGAAGC TCTTGGTTGG GAAGCTCCAG AGTTCGGTCA CATGACCTTG ATTATCCACT       1920

CTGAAACTG                                                              1929
```

(2) INFORMATION FOR SEQ ID NO: 304:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 708 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 304:

```
AAATTTAAGA AAAAGGAGAC ACATCATGTC TAAAAAAGTA TTATTTATCG TCGGATCACT         60

ACGTCAAGGT TCTTTCAACC ACCAAATGGC GCTCGAAGCT GAGAAAGCAC TTGCTGGTAA        120

AGCGGAAGTT AGCTACCTTG ATTATTCAGC CCTTCCTCTC TTCAGCCAAG ATTTGGAAGT        180

TCCAACACAT CCAGCTGTAG CTGCTGCTCG TGAAGCAGTT CTCGTTGCGG ATGCTATCTG        240
```

1334

GATTTTCTCT CCAGTCTACA ACTTCTCTAT CCCTGGTACA GTGAAAAACT TGCTTGACTG   300

GCTATCTCGT GCCCTTGACT TGTCTGATAC ACGTGGCGTT TCTGCCCTTC AAGACAAGTT   360

TGTCACAGTA TCATCTGTAG CCAATGCAGG GCACGATCAA CTTTTCGCTA TCTACAAAGA   420

CCTCTTGCCA TTTATCCGTA CACAAGGCGT TGGTGATTTC ACTGCTGCAC GTGTTAATGA   480

CTCTGCCTGG GCAsACGGAA AATTGGTTCT TGAAGAAACA GTCCTAAACT CACTTGAAAA   540

ACAAGCTCAA GACTTGGTCG AAGCTATCAA GTAACTAACA CTCAATAAAA ATCAAAAAGC   600

AAACTAkGAA GCTArCCGCA AGCTACTCaA gCACTGCTTT GAGGTTGTAG ATAGAACTGA   660

CGAGTGTnnA ACATATATAC GGTAAGGCGA CACTGACGTG GCTTGAAn   708

(2) INFORMATION FOR SEQ ID NO: 305:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 781 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 305:

CTTCTTTTCT TGGAAATAGG TGTATAATAC GTTTATTAAA TTTTTGAGGA GTTGTCTATG   60

AAGAAAAGTT TTATCCATCA ACAAGAAGAA ATTTCCTTTG TCAAAAACAC TTTTACCCAG   120

TATTTGAAAG ATAAGCTAGA AGTTGTCGAA GTTCAAGGTC CTATCTTGAG TAAGGTCGGT   180

GACGGAATGC AGGACAACCT GTCTGGTGTG GAAAATCCAG TATCGGTCAA GGTTCTCCAA   240

ATCCCTGATG CTACTTATGA AGTGGTGCAC TCACTTGCTA AATGGAAACG CCACACCTTG   300

GCTCGTTTTG GCTTTGGTGA AGGAGAGGGT CTCTTTGTCC ACATGAAAGC CCTTCGTCCA   360

GATGAGGATT CCTTGGATGC AACCCACTCT GTTTATGTTG ACCAGTGGGA CTGGGAGAAG   420

GTTATCCCAA ATGGTAAGCG TAACATCGTT TATCTAAAAG AAACAGTTGA GAAGATTTAT   480

AAGGCTATTC GCCTGACTGA GCTAGCTGTT GAAGCCCGCT ATGACATCGA GTCTATCTTG   540

CCAAAACAAA TTACCTTTAT CCATACAGAA GAATTGGTAG AACGCTACCC AGACTTGACA   600

CCGAAAGAAC GTGAAAATGC GATTTGTAAA GAATTTGGAG CCGTCTTTTT GATTGGTATC   660

GGTGGCGAGT TGCCAGATGG TAAACCGCAC GATGGACGTG CACCAGACTA TGATGACTGG   720

ACAAGCGAGT CTGAGAATGG CTACAAGGGT CTAAATGGTG ATATTCTTGT CTGGAATGAG   780

T   781

(2) INFORMATION FOR SEQ ID NO: 306:

        (i) SEQUENCE CHARACTERISTICS:

1335
(A) LENGTH: 846 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 306:

```
CCCGCATCTT GTAGGGTTTT AACGGGCACG ATTTTCATAT CCGTCTTGAT TGTTTTAGCC          60

GCTTCTAGGG CTGTTTGGTA GTTGTTTTTC GCGTCCGGAT GCGCCTTTTG TTCTTCTTCG         120

CTAACAGGGT TATCAGGAGC AAAGAAAATA GCAGCACCTG CCCTAGCCGA AGCTACAACC         180

TTCTTATCAA TACCTCCAAT GTCTCCCACA TTACCATCGC GGTCAATGGT ACCTGTACCG         240

GCAACAATAC GACCATTACG AAGATCTGGG TGAGCTATTT GAGTATAGAT AGCTAGACTA         300

AACATGAGAC CAGCACTTGG ACCGCCAATA CCAGCTGTTG AAAAGCTAAT TGGGACATTG         360

CTGATTACCT CTGTACGGTC AATCAAGCCG ATTCCAATTC CATTTTTGCC ATTTTCCAAG         420

GTGATGATTT TTCCTTCTGC AGACTTGGTT TGCCCATCCT CTTCATAGGT GACCTTGACG         480

GAATCCCCTA ATTTTTGAGA ACTGACGTAA TCAATCAAGT CTTTGGAACT ATCAAAGGTC         540

TGATCATTGA CTGCTGTGAC TGTATCAGAG ATATTGAGAA TCCCTTTAAA GGTTGAATTA         600

TCCGTCACAT TCAAAACATA AACTCCAAAG TACTTGAGTT CGATATCCTT ACCAGCTGTT         660

TTTAGTCCTT GATACTTGGC CATATTTTCC GATGTTTGCA TGTAGAATTG ATTGATTCGC         720

ATAAATTCAA CATCGGAAGA ACCACCTGTA GTCTCCTGAG CACTACGAAT ATCTGTAAAA         780

GGTGTCAACC AAGCATAAAT CATATGAGCT AAAGTGGCAT GTTGAACACC AACCGTAACG         840

AATTGT                                                                   846
```

(2) INFORMATION FOR SEQ ID NO: 307:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 829 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 307:

```
GCGATCTGCT TGGGCTTTTC CTATTACCTT ATCTAATAAA TAGGTACGCA GACTCATAAC          60

CATATAAAGT CCACCCCCCA TGGCACCGAC AAGAGCTACA TAAAAGAAGC TCCACAAACG         120

TCCACTTGGT TGGAAGAAAA ATCCTAACAG CCACTGGATG GTTCCTATTA ACAGAAACAT         180

GACTAGGGTC AGCAAACTGA TTAAAATGGT TCGCTTCAAA ATCACCTTGC GCTTGACACC         240
```

1336

```
AGTTACTTTA CAAATATCCC GATACATCAA GACGTTAGGA ATGATGAGAG CAATGGTTGT          300

TGAAATCAAA GGACCATAAC TGTGGAAGAG GGCGATGGTA GGTAGTTGCA AGACTAGCTT          360

GGCAATAGAA CCATAGATAA AATAGAGAAC GGCCTTGCGG TTGCGGAACA TGGCCTGAAG          420

CATTGGAGAC AAGACCATGT ACAAGCCTAA AATAATAGAC TGCAAAACTG CAAAGACAAA          480

TAAGCCCAGA GCCAAACTAT CTGGCTTACC ATAGAAGACC GTATAAAGAG GTTCTCCTAC          540

CATAACCACT CCAACCGTTG CTGGTAGCAA GAACATAAAG AGTAGGGTGA GACTGTCCTG          600

AACGAGACGA GAAGCTGCTT TCAAGTCCCC CTTGACATAG TTTTCCGTCA AAAGTGGCAA          660

ACCAACACTC CCAATCGAAA CCCCTACAGA AATCAAAATC ATCGTGATTT TATTAGGATT          720

GGCTGAGAAA TAAGAAAACA TGACAACCAA GTCCTCATTG CTGTAGTTGG TAAACCAGCT          780

CATACTATTG ATAAAGGTCA GCTGAGTCCA AATCTGGAAG AGCTGGATG                     829
```

(2) INFORMATION FOR SEQ ID NO: 308:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 464 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 308:

```
CGAACATCTT GCTGGCTGAT TCGTCTGCCG CCATCGCAGC CCCGAACACA TTGCGACCCA          60

TGGCAAGCGG GCTCAATCCG CACATGGGAT CCGTGCCAAA GCCCCGCGTG TGCATCATTT          120

GCTCATCTAG TAACGTATGA GGTTTGCCTT CGCTGTCGAT AAACCGATAT TCAATCGCAC          180

CACTGCTCGT TCTCCGCGGA GGGGAAACCG ACTGCGGTAG GATGAACTCC AGAGAAGAGA          240

GATCACGACC TACCAGGTGC GGCTCGTTGA AGCTGTTGCC GCTTAGCAGC AGGCTCGCCA          300

CCACGCATTC CCAGAACTCA ACGGGGGTTT GATCGGCGTT CGGTTGCTGA CTAATAACTC          360

GGTGCACGGG ATGCGAAGTG GCCACTTCTG GCACACCGTT CTTGTCTTCG TAGAGAGCAA          420

TTGGGAGGGT GGCCAGCGTT TCGGCGATGA GGCGCACGCA GGCC                          464
```

(2) INFORMATION FOR SEQ ID NO: 309:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 982 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 309:

1337

```
CCGTCTATAA TGGTAATAGA TTTTATTTGG AGGTTTTTAT GTCATTTCTA TCAAAAAATG        60

GAGCAGGTAT CTTGGCCTGC CTTCTCATTT CCATCCTATC TTGGTACTTA GGAGGATTCT       120

TCCCTGTGGT TGGCGCGCCC GTTTTTGCCA TTTTCATAGG CATGCTCCTA CATCCCTTTC       180

TCTCGTCCTA TAAACAACTG GATGCTGGTT TGACCTTTAG TTCCAAGAAG TTGCTCCAAT       240

ATGCCGTTGT CTTGCTTGGT TTTGGTCTCA ATATCTCGCA GGTCTTCGCA GTTGGCCAAT       300

CTTCACTCCC TGTCATCCTG TCCACTATCT CAATAGCTCT GATTATTGCC TACCTCTTCC       360

AGCGTTTCTT TGCCCTGGAT ACAAAACTGG CTACCTTGGT TGGAGTAGGT TCTTCTATCT       420

GTGGGGGTTC TGCCATTGCA GCGACAGgCC CGTTATTGAT GCTAAGGAAA AGGAAGTAGC       480

CCAAGCCATT TCCGTTATCT TTTTCTTCAA TGTCTTGGCT GCGCTCATCT TTCCAACCCT       540

CGGCACCTGG CTTCATCTAT CCAATGAAGG CTTCGCCCTC TTTGCAGGGA CTGCGGTCAA       600

CGACACTTCC TCTGTAACGG CTGCCGCCAG CGCTTGGGAC AGTCTTTACC AAAGCAATAC       660

CCTCGAGTCT GCAACCATTG TTAAACTCAC ACGTACTTTG GCCATTATCC CTATCACGCT       720

CTTTCTATCC TACTGGCAAA GTCGCCAACA AGAAAACAAG CAAAGCCTGC AACTGAAAAA       780

AGTCTTCCCA CTTTTTATCC TTTACTTTAT CCTTGCCTCT CTCCTCACTA CACTACTCAC       840

CTCTCTAGGT GTGTCCAGTA GTTTCTTTAC TCCTCTCAAA GAACTCTCTA AATTCCTTAT       900

TGTCATGGAC ATGAGTGCTA TCGGTCTCAA AACCAATCTC CTCGCTATGG TCAAATCCAG       960

TGGAAAATCC ATTCATCATG GA                                               982
```

(2) INFORMATION FOR SEQ ID NO: 310:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1939 base pairs
        (B) TYPE: nucleic acid
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 310:

```
CTAGCTGCCA ATATGATTGG GGTGCAGAAG CGCGTGATTA TCTTTAATCT TGGCTTGGTT        60

CCTGTGGTCA TGTTTAACCC AGTGCTTCTG TCCTTTGAAG GATCCTATGA GGCAGAAGAA       120

GGCTGTTTGT CCTTGGTAGG TGTGAGATCA ACTAAGCGTT ATGAAACCAT AAGGCTTGCC       180

TATCGTGACA GCAAGTGGCA GGAACAGACC ATTACCTTGA CAGGCTTCCC AGCTCAGATT       240

TGCCAGCATG AGCTGGATCA CTTGGAAGGA CGAATCATTT AGGAGGAAAG CAAATGAAAC       300

GAATAGTCTT TGAACTTATT TTTATCGCAA CGACCTGGTA TATCTTTTTA CCGCCCCTTA       360
```

1338

```
ACCTGACCAG CTGGGAATTT CTCTTCTTCC TCTGTGGGCA TTTGTTAGTT GTGGCAATAT      420

TATTTGGCTT TGGCAAGGGG ATAAACCTTG TCAAAACGGT TCATGTGCGC CACGGTAAGG      480

CGGAAGCTGC CTTAAATCTT GAGGGTTTCA AAATCAATCG GTTAGGGAAA ATTCTGTTAG      540

CTTCGATTGG AGGAATTCTT CTCTTGGCAG CTTTGGTTTc CTTGGTAACT TCCAGCATGT      600

TTCAGGCTAA AAATTATGCC AATGTAGTCA CGGTTACGGA AAAAGACTTT ACTGAATTTC      660

CTAAGAGTGA CACCAGTAAG GTTCCTATCC TAGATAGAAG TACTGCTGAA AAAATTGGAG      720

ACCGCTACTT GGGTTCCCTA ACCGATAAGG TGTCGCAATA CGTAGCGGCA GATACCTATA      780

CCCAATTGAC AATTGATGGG AAACCTTATC GGGTCACACC ACTAGAATAT GCAGACCCTA      840

TCAAATGGTT TAACAATCAA GCCAAGGGAA TCGGTGAGTA TATTAAGGTG GACATGGTAA      900

CTGGAAATGC GGATTTGGTG GACTTGAAGA CACCAATCAA GTATTCAGAC TCGGAGTATT      960

TTAACCGTGA TGTCAAACGT CACCTGCGCT TGAAGTACCC GACCAAAATC TTTAAAACTC     1020

CATCTTTTGA GGTGGACGAT GAGGGCAATC CTTTCTATGT AGCAACGGTT TACCAAAAGC     1080

AATTTGGACT TGCTGTTCCT CGTCCTGCTT CAGTCATTAT CTTGGATGCT ACAAATGGAG     1140

AAACCAAGGA ATACAGCTTA TCAGATGTTC CAGAATGGGT GGACAGGATC TATCCAGCAG     1200

AGGAAACCAT TGAGCAAATC AACTACAACG GCAAGTACAA GGACGGTTTC TTGAATGCCA     1260

TGATTTCCAA GAAAAACGTG ACCCAGACTA CCAATGGCTA TAATTACTTG TCTATCGGTA     1320

ATGACATCTA TCTCTACACA GGTGTGACGT CGGCTAATGC GGATGAGAGT AATCTTGGTT     1380

TCATCCTTGA AAATATGCGA ACAGGAGAAA TCACTAAGTA TAGCTTGGCT TCTGCGACAG     1440

AAGAATCAGC CCGTGAATCA GCAGAAGGTG CTGTTCAGGA GAAATCCTAC AAAGCAACCT     1500

TCCCAATCCT CATCAACCTC AATGACAAGC CTCTCTACAT CATGGGCTTG AAGGACAATG     1560

CTGGCTTGGT CAAAGAGTAC GCCCTGGTAG ACGCAGTCGA GTACCAAAAT GTTATCGTTG     1620

CTACTACAGT GGAAGAGATG CTCAGCAAGT ATGCCAATAA AAACGACCTT GAAATTGACA     1680

ATGCAACGAC AGAAAGCATC AATGGAGTAG TAGCAGACCT CAAATCAGCT GTTATCAAGG     1740

GAGACACTGT CTACTTCTTT AAAGTTGATG GCAACATCTA CAAGGTCAAG GCTTCAGTAT     1800

CCGATGACCT TCCTTACCTT GAAAATGGTA AAACCTTCGA AGGTCAAGTA GGAAAAGACA     1860

ATTATCTCAA GACCTTTAAG CTACGGTAAA AATAGGTTTT TTTCAGAAAG TATATGTTAT     1920

AATAAGGTAA ATTAAGCCG                                                  1939
```

(2) INFORMATION FOR SEQ ID NO: 311:

    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 907 base pairs
        (B) TYPE: nucleic acid

1339
        (C) STRANDEDNESS: double
        (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 311:

CCTGCTAATA GAGAGAAAGA CTAGGAGTAG AAGTAAGCCA ATTAAATAAT GAGAAAGTTT   60

CATACCCCGT CCTTTCATGT AGATTTGGTA TCGAAAGATA TCTGCGGATA TAAATGTAAC   120

ATTATTTTTC TAATCTGTCA ATAAAATTTC TGACAATTTA ATAAATACAA CAAGGAGAGA   180

GCAACAAGAC TTTCTCCTTT GTTATCCTAT TCTAAAATGT TTTTACCTTA ATCTGATAAA   240

ATAATATCTT CGAGGGAGTA GCTAGCCGTC CAATCAAGAT ATTGTTTAGC TTTTGAAGCA   300

TCTGCTAGGA CACTGGCTGG GTCACTAGCA CGTCGAGCAA CAATCTCGTG TGGGATTTTT   360

TAATTTAGTA ATTCTTCAGC AGTTTTAAAG ATTTCTTTGA TAGTATAGCC TTTTTTAGTT   420

CCTAAGTTAA AGATTTGAGA AGAACTGTCT TCTTGAAATA GGTAGTTCAT TCCTTTAACA   480

TGAGCCTATG CAAGGTCCAA GACATAAATG TAATCTCGAA TACATGAACC GTCACGTGTA   540

TCGTAGTCAT CTCCAAATAT TTTTAAGCTA TCATTTTGTC CCAATGCGGT CTTGTTGATA   600

TTTGGAATGA TGTGAGTTGG ATTTTTCACA CGCAGACCGT TTGAAGCATC CATTTCAGCC   660

CCAGCAACAT TAAAGTAACG GAAAATAACA TATTTCCAGT CGTAGCGATT GGCCATCCAG   720

TAAATCATTC GTTCGCCCAT CAGTTTTGTC TCTGCATAAG CGTTCACAGG GTCGAGCAGG   780

GTATCTTCAG TCACCGGCTT GTCAATACAG TTATTTCCAT AGAGAGAAGC AGTCGAAGAG   840

AACATGATTT TTTGAATGCC AACTTCAGAT AAGACTTTGA GAACTTGGTT CATACCAGCA   900

ACGTTGG   907

(2) INFORMATION FOR SEQ ID NO: 312:

        (i) SEQUENCE CHARACTERISTICS:
            (A) LENGTH: 2170 base pairs
            (B) TYPE: nucleic acid
            (C) STRANDEDNESS: double
            (D) TOPOLOGY: linear

    (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 312:

CCACATAAAG GTAAATATCT TTTGTACTAT CTTGGGCATC CAAGAAAAGC AATTGGGCAA   60

TAACAGAGTT AGCCATATTG TCTTCAACCG GACCTGTCAG CATAATGATG CGGTCTTTGA   120

GAAGACGTGA GTAAATATCG TAAGAACGTT CTCCACGGCT TGTTTGTTCA ATAACTACAG   180

GAATCATTCA TTTCTCCTTT TGAGTTTTAA TTTTGTTGGT CAAATGACTG AAGATAAGAC   240

                                        1340
    TATTATAATA TCTTGGTCAA AAAAGGTCAA ATTTTTGCTC TGCTTTCATT AGACAGAAAC   300

    AAAAACCCAA CCTCCTTTCG TGACTGGAAA TACTTTTCCA AGTCATTCTT CTTTTCGATC   360

    TTATTTTGTA CCGAACAAGC GGTCTCCAGC ATCTCCAAGA CCTGGAACGA TATAACCGTG   420

    TTCGTTCAAA CGTTCATCCA AGGCTGCTGT AAAGATTTCT ACATCTGGAT GAGCTTCTTG   480

    AAGGGCTTTT ACACCCTCTG GAGCAGATAC AAGGCAGACA AATTTGATAT TTGATGCGCC   540

    ACGTTTTTTA AGAGAATCAA CAGCCAAGAT TGCTGAGCCA CCTGTTGCCA ACATTGGGTC   600

    TACTACAAAA ATTTGACGTT GGTCAATGTC CTCAGGCAAT TTCACCAAGT ATTCAACTGG   660

    TTGAAGTGTT TCTTCATCAC GGTACATACC GATGTGGCCA ACTTTAGCAG CTGGAACCAA   720

    GTTCAAGAGA CCATCAACCA TCCCGATACC TGCACGCAAG ATTGGGACGA TGGCCAATTT   780

    CTTACCTGCC AATTGTTTTT GAACTGTTTT TGTAATTGGT GTTTCGATTT CCACATCTTC   840

    TAGTGGAAGA TCACGAAGTA CTTCATACCC CATCAACATT GCAATCTCAT CTACTAGCTC   900

    ACGAAAAGCT TTTGTAGAAG TATCTGTACG ACGCAAGATT GACAATTTGT GTTGAATCAG   960

    TGGGTGATTA ATAACTTCAA TTTTTCCCAT TTTTGGAATT CCTTCTTTCA ATTTATTCTT   1020

    CTTATTATAC CAAAAAACGG TTTAAAAATC TTTCTAAACC ATTTATTTTT GATAATTTTT   1080

    ACATTAGATC AGCCTCTTTA AGAGCTGTCT GTACTGTCTC AAGTGGTAAA TGGGTCAATT   1140

    CTGTCCCTTT TTCTTGATAA AGGTATTGGG CGTAGTCGTC CATTCGGTAC TGGTTGATAT   1200

    AAACCACGCG CTTGCAGCCG ACCTGAAGCA ATTGTTTTGT ACAGTTGAGA CAAGGAAAAT   1260

    GGGTTACATA GGCTGTAAAG CCTTTGGGAA CACCACGCTC AGCACCTTGA AGGATAGCAT   1320

    TGACCTCAGC GTGAAGGGTG CGAACGCAGT GGCCTTCAAT GACCAAACAT TCGTGATCAA   1380

    TACAATGCTC AGTCCCTGAC ACCGAACCAT TGTAACCAGT GGAAATAACC TTATTATCTT   1440

    TTACCAGAAT CGCGCCCACT TTAGCACGTT TACAAGTGGA ACGATTCGCA ATTAGTAGAG   1500

    CTTGGGCTGC AAAATACTCA TCCCAGGCCA GTCTTTTTTC AGTCATCTCT TTTCTCCTTT   1560

    TTCTCTATTT TTTAAAAAAT GGTAAACCTA AATCTGCAAT CTTTTCAGCT GGTACCTTCA   1620

    TGCCATCCTT GATCCATTTT AGAAGGACAG AGACGATGGC TGAGCTCCAG AAGGAATGAA   1680

    GATAAGAGCT GACACCTTTT GATTTCCCAT GGTATTTTTC TAGAAATTCC TGCATGGCTT   1740

    GGACAAAGAT TTTTTCCAGA TGGTAATCCA AGGCCAATTG AATTACTCTA GCTTCCTTTC   1800

    TGGCCTCCCG GAAAAGGTGA ACCCAAACCA AATAAAGGTC TGTCTTTAAA TCGTAATGAT   1860

    GCAGCTGTTC CATAATATTG TGGACAGTTC GTTTAAAGAC GCTCTCTAAA ATTTCCTCTT   1920

    TGGAGTCATA ATTGCGATAA AAGGCCGCAC GCGAAACACC TGCACGTTTG ACCAATTCAG   1980

    AAATACTAAT CTTGGTCAGT TCCTTTTTTT CCAAGAGTTG CAAGAGGGCT GTTTCAATGG   2040

1341

CTTCTCTGGT TAATAAATTG GATTCTTGGT TTGATTTTCT GAGATTTTCA AGAGACTTTT   2100

CAGAGATTCT ACGTTCAGAC ATAACATTTT CTTTCTACTT GTCACAACAG ACGGATGATG   2160

CTTTTGTTTC   2170

(2) INFORMATION FOR SEQ ID NO: 313:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 539 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 313:

ATCTGCACGA ATCAGGGCTT TCTAAGTGAC TATTTCCACC GAAATATTAT TTATATCAGG   60

AGGACATTCA TATGTCACGT TATACAGGAC CATCTTGGAA ACAAGCTCGT CGTCTTGGCC   120

TTTCACTTAC AGGTACAGGT AAAGAATTGG CACGTCGTAA CTACGTACCA GGACAACACG   180

GACCAAACAA CCGTTCTAAA TTGTCAGAAT ACGGTTTGCA ATTGGCTGAA AAACAAAAAC   240

TTCGTTTCAC TTACGGTGTA GGTGAAAAAC AATTCCGTAA CTTGTTCGTA CAAGCTACAA   300

AAATCAAAGG CGGAATCCTA GGTTTCAACT TTATGCTTCT TTTGGAACGT CGTTTGGATA   360

ACGTTGTTTA CCGTCTTGGT CTCGCGACTA CTCGTCCTCA AGCTCGTCAA TTCGTAAACC   420

ACGGTCACAT CCTTGTTGAC GGGAAACGCG TTGATATCCC ATCATrCCGC GTAACTCCAG   480

GTCAAGTGAT CTCAGTTCGT GAAArATCAT TGAAAGTTCC AGCAATCCTT GAAGCAGTA   539

(2) INFORMATION FOR SEQ ID NO: 314:

      (i) SEQUENCE CHARACTERISTICS:
          (A) LENGTH: 667 base pairs
          (B) TYPE: nucleic acid
          (C) STRANDEDNESS: double
          (D) TOPOLOGY: linear

      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 314:

CCGGTTTTGC TCCTTCTCTA CGGCTACGAC GTGATGTATC TCTGATGATA TCCACTGTTT   60

CTGTAGCAGG CGTAGGTGTT TCTGGACCTG CTTGTTCTGC TTTTTTCTCT GCCGTCGTAT   120

AGGAAACAGC TACCCTTGTT GGGGTTTCAT TGTATTCTCT TTCAAGTTTC TTAGGTCTAA   180

CAGGACCTGG ACCTGGTCTT GATCCACTTT CTTCCGCTGG AGAAGAAGGT ACATCTTGAC   240

TTGGATGACT TGGAACACCA GGAGTTTCTC TTTGAATCTC ATCTGCTGGA GAAGCTGGTA   300